Dell

Collector's Series

FIGURE LOGIC

VOLUME 3

A collection of 59 challenging number puzzles selected for your solving pleasure by the editors of Dell Magazines

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VOLUME 3

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FIGURE LOGIC

How to Solve Figure Logic

Figure Logic is a crossword-type puzzle in which the answers are numbers instead of letters. It is solved by completing some simple arithmetic problems, which will enable you to move from clue to clue.

You will not always be able to complete an entire number at first, but you may, by logic, be able to determine what one or more of the digits will be. If you enter the digits you know into the diagram, they may help you to solve other clues. This will enable you to return to the unfinished numbers and complete them. Starting helps are located on the bottom of the solution pages.

Rules and Definitions

1) No answer ever begins with a zero.
2) The square of a number is that number multiplied by itself; the square root of a number is a number that, when squared, results in the given number. The square of 6 is 36; the square root of 36 is 6 (6 x 6 = 36).
3) The cube of a number is that number multiplied by itself multiplied by itself. The cube of 6 is 216 (6 x 6 x 6 = 216).
4) When solving diagramless Figure Logics, remember that the diagrams have top-left to bottom-right symmetry, so when you determine the location of one black square, you can also enter its counterpart.
5) Cryptic Figure Logics have clues that contain a capital letter that stands for a digit 1 to 8. When the grid is completed, the letters written in corresponding numerical order will spell out a word or phrase.

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Figure Logic 1

ACROSS

1. Three times 15-Across
3. Three times 15-Down
5. 3-Down minus 18-Across
6. Ten times 21-Down
8. Twice 10-Across
10. Three times 18-Across
11. Nine times 4-Down
13. Three times 10-Down
15. Four less than 5-Across
16. Six times 27-Down
18. Two more than 1-Across
19. Three times 21-Down
22. 3-Across plus 4-Down
24. Three times 10-Across
26. 2-Down plus 25-Down
28. Nine times 11-Across
29. Four more than 31-Across
30. 3-Across plus 11-Across
31. Two more than 18-Across

DOWN

2. Five more than 24-Across
3. 19-Across minus 21-Down
4. One more than 15-Across
5. Twice 3-Down
7. Five times 9-Down
9. Three times 31-Across
10. 3-Down minus 1-Across
12. Six more than 19-Across
14. Half of 6-Across
15. 3-Across minus 18-Down
17. 1-Across plus 4-Down
18. Twice 15-Down
20. 3-Across plus 27-Down
21. Half of 3-Down
23. 29-Across plus 5-Down
25. Three times 29-Across
27. Three times 4-Down
28. Nine times 15-Across

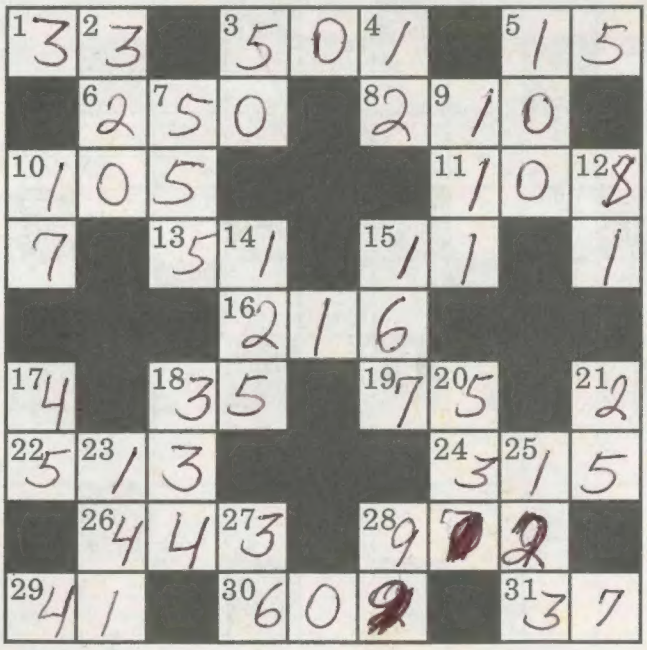


Figure Logic 2

ACROSS

1. Its digits total six
4. Digits of 5-Down rearranged
6. 2-Down plus 10-Down
9. Three times 4-Across
11. 9-Across plus 25-Down
13. Three more than 24-Down
15. 13-Across minus 18-Across
16. First two digits of 26-Across
17. Half of 4-Across
18. One-third of 8-Down
19. 18-Across plus twice 16-Across
21. Same as 8-Down
22. 3-Down multiplied by 27-Down
24. Half of 26-Across
26. Square of 14-Down
28. 16-Across multiplied by 23-Down
29. Four times 22-Down

DOWN

1. Half of 5-Down
2. 1-Down multiplied by 16-Across
3. One-third of 1-Across
4. Each digit is a four or an eight
5. Square of 7-Down
7. Four hundred less than 17-Across
8. 3-Down plus 7-Down
10. Square of 1-Down
12. Twice 21-Down
14. Half of 22-Down
20. Half of 2-Down
21. It reads the same backwards as forwards
22. First three digits of 22-Across
23. Average of 15-Across and 19-Across
24. 7-Down plus 23-Down
25. Eighteen times 15-Across
27. Twenty more than 16-Across

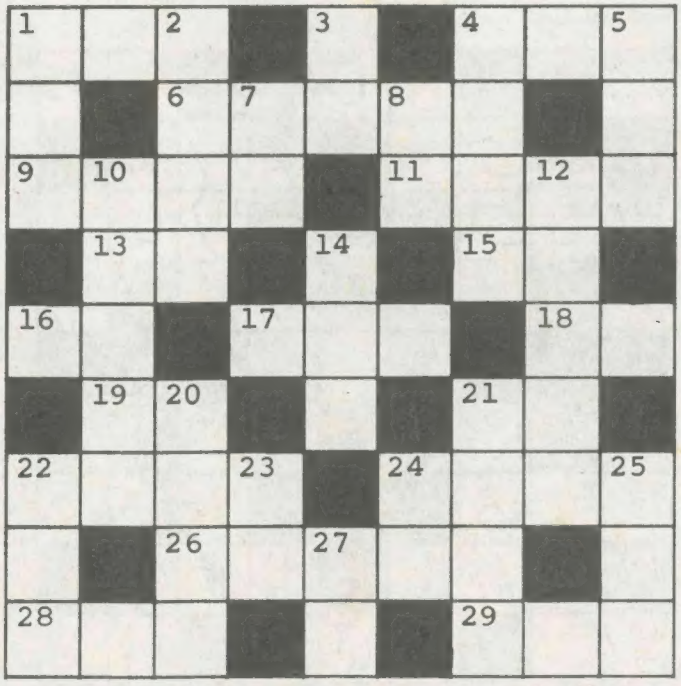


Figure Logic 3

ACROSS

1. 3-Down multiplied by 27-Down
4. 1-Down plus 3-Down
7. One more than 27-Across
8. Two times 27-Down
9. Four times 8-Across
11. One-fourth of 1-Across
13. Two times 26-Across
14. Consecutive digits in order
16. 7-Across multiplied by itself
17. 14-Across multiplied by itself
18. Eight times 13-Across
20. Three times 24-Down
23. 13-Down plus 19-Down
24. 3-Down plus 10-Down
26. One-third of 10-Down
27. One-fourth of 23-Across
28. One-third of 13-Across
30. 18-Down plus 20-Across
31. 4-Down multiplied by 27-Down

DOWN

1. 1-Across plus 7-Across
2. Two times 19-Down
3. One-third of 11-Across
4. 27-Across multiplied by 27-Down
5. Two-thirds of 9-Across
6. 22-Down minus 3-Down
10. One less than 5-Down
12. 3-Down multiplied by 9-Across
13. Two times 7-Across
15. Consecutive digits in order
16. Two times 14-Across
18. Eight times 16-Down
19. Digits of 10-Down reversed
21. Same as 2-Down
22. One-sixth of 17-Across
24. 8-Across plus 24-Across
25. Four times 4-Down
27. One-third of 19-Down
29. Five more than 13-Across

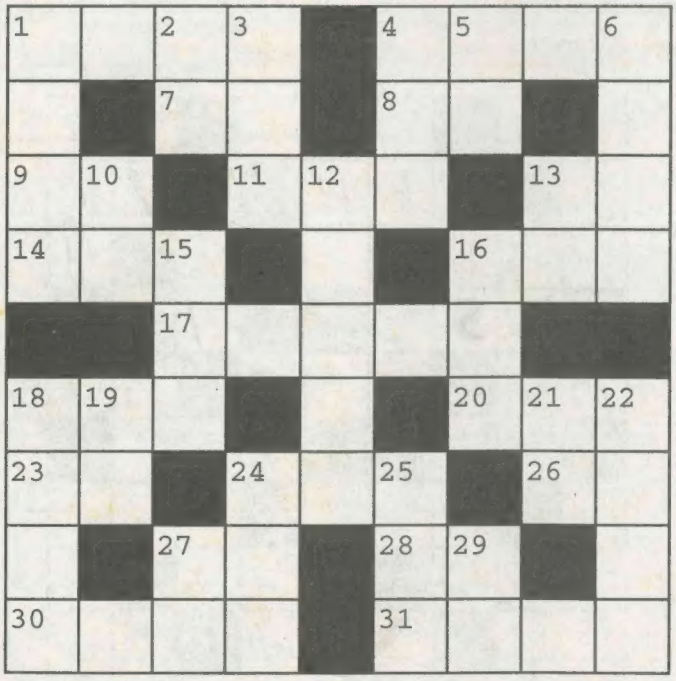


Figure Logic 4

ACROSS

1. One less than 31-Down
2. 4-Across times 4-Down
4. Five less than 4-Down
6. Two times 29-Down
7. Two times 34-Across
8. Two times 1-Down
10. 13-Across times 18-Across
11. 8-Across minus 26-Across
13. One-half of 4-Across
15. 34-Across minus 1-Across
16. 25-Down minus 33-Across
18. Five less than 32-Across
19. Two times 12-Down
21. Two times 7-Down
24. 6-Across plus 11-Across
26. 1-Down plus 6-Down
28. 26-Across plus 23-Down
30. One-half of 10-Across
32. One more than 19-Across
33. 11-Across plus 7-Down
34. Two times 31-Down

DOWN

1. 6-Across plus 5-Down
2. Five times 13-Across
3. 1-Across times 4-Across
4. Five less than 17-Down
5. Four times 19-Across
6. Three times 2-Down
7. 19-Across plus 2-Down
9. Two times 14-Down
12. Three times 13-Across
14. 10-Across plus 3-Down
17. One less than 12-Down
20. 21-Across plus 24-Across
22. 24-Across plus 31-Down
23. 6-Across plus 21-Across
25. 13-Across times 32-Across
27. Two times 6-Across
29. 12-Down plus 31-Down
31. Two times 4-Across

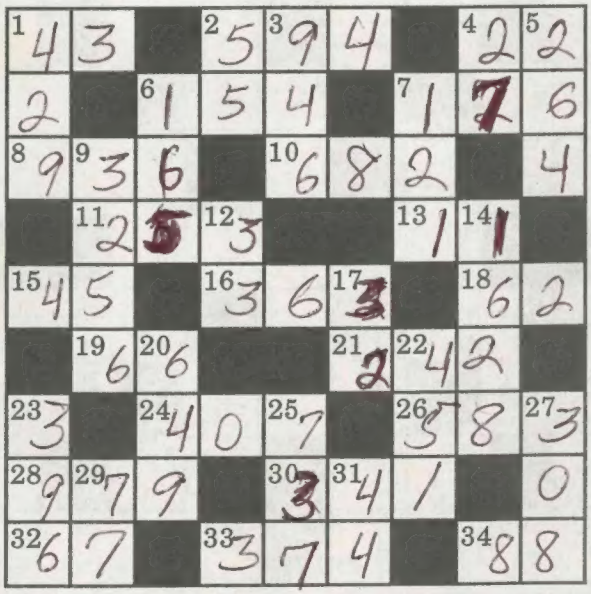


Figure Logic 5

ACROSS

2. 32-Across plus 10-Down
4. Five less than 35-Across
7. Two less than 10-Down
9. One half of 31-Down
11. Five more than 36-Across
12. Two less than 18-Across
14. Four times 23-Across
16. 30-Across plus 36-Across
18. Three times 1-Down
21. One half of 15-Down
23. One more than 3-Down
25. Two times 19-Down
27. Two times 14-Across
30. Seven more than 25-Across
32. Two times 34-Across
33. Digits of 7-Across reversed
34. One third of 36-Across
35. Fifty more than 23-Across
36. One half of 17-Down

DOWN

1. Three times 22-Down
3. Three times 25-Across
5. 14-Across plus 25-Across
6. One more than 9-Across
8. Two less than 31-Down
10. Digits of 32-Across reversed
13. Digits of 12-Across and 22-Down rearranged
15. Digits of 18-Across and 32-Across rearranged
17. Three times 32-Across
19. One more than 17-Down
20. Four more than 7-Across
22. One half of 9-Across
24. One half of 21-Across
26. Two hundred more than 30-Across
28. Six more than 2-Across
29. 10-Down plus 26-Down
31. Thirty less than 25-Across
32. Three times 33-Across

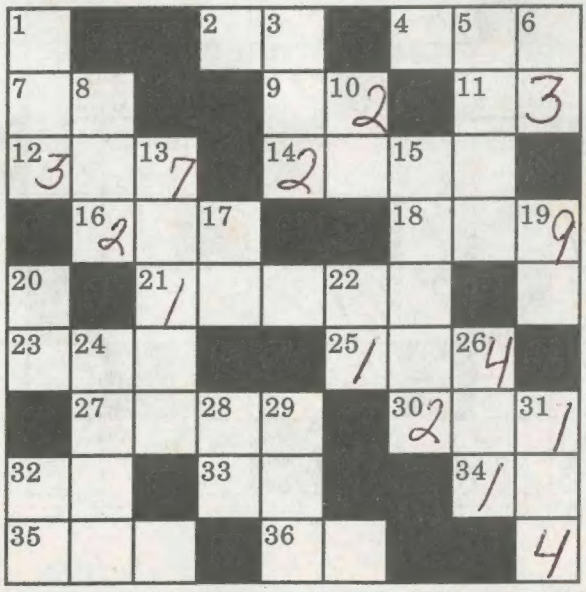


Figure Logic 6

ACROSS

1. 2-Down multiplied by 24-Down
4. Quarter of 1-Across
7. See clue to 5-Down
8. Last three digits of 11-Across
10. See clue to 26-Across
11. 4-Across plus 1-Down
13. Twice 4-Down
15. Half of 18-Across
17. 10-Across multiplied by 29-Down
18. Its digits total seven
19. Twice 2-Down
21. Digits of 9-Down reversed
23. Digits of 11-Down re-arranged
26. Four more than 10-Across
28. 2-Down multiplied by 29-Across
29. Digits of 26-Across reversed
30. 1-Across minus 3-Down
31. 23-Across divided by 29-Across

DOWN

1. 1-Across minus 4-Down
2. Three times 27-Down
3. Five times 24-Down
4. See clue to 13-Across
5. Twice 7-Across
6. Eight times 9-Down
9. Consecutive digits in order
11. 13-Across multiplied by 26-Across
12. Seven times 11-Across
14. Half of 3-Down
16. 1-Across divided by 27-Down
19. 8-Across plus 18-Across
20. Three times 5-Down
22. Nine times 8-Across
24. Four times 5-Down
25. 18-Across minus six times 29-Down
27. See clue to 2-Down
29. 5-Down minus 26-Across

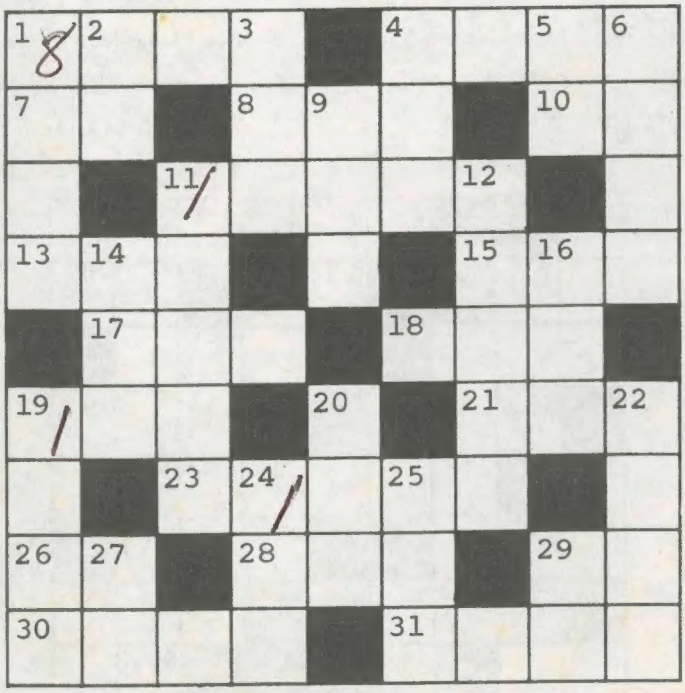


Figure Logic 7

ACROSS

1. Three times 19-Down
4. Five times 13-Across
7. Four more than 5-Down
8. Digits of 4-Down rearranged
10. 14-Down minus 25-Down
11. Four times 30-Across
13. One-seventh of 1-Across
15. 10-Across plus 24-Down
17. Three times 27-Down
18. One more than 19-Across
19. Twice 27-Down
21. Twice 8-Across
23. Same as 12-Down
26. Last two digits of 19-Across
28. One-third of 14-Down
29. Three times 2-Down
30. Its digits total twenty
31. 1-Down plus 21-Across

DOWN

1. 2-Down multiplied by 9-Down
4. 17-Across minus 5-Down
6. Seven times 3-Down
9. Five times 5-Down
11. Square of 19-Across
12. 1-Across plus 11-Across
14. 3-Down plus 19-Across
16. 15-Across plus 24-Down
20. Ten times 2-Down
22. Seven times 24-Down
25. Five times 18-Across
29. One more than 5-Down

2.
3.
19.
24.
5.
27.

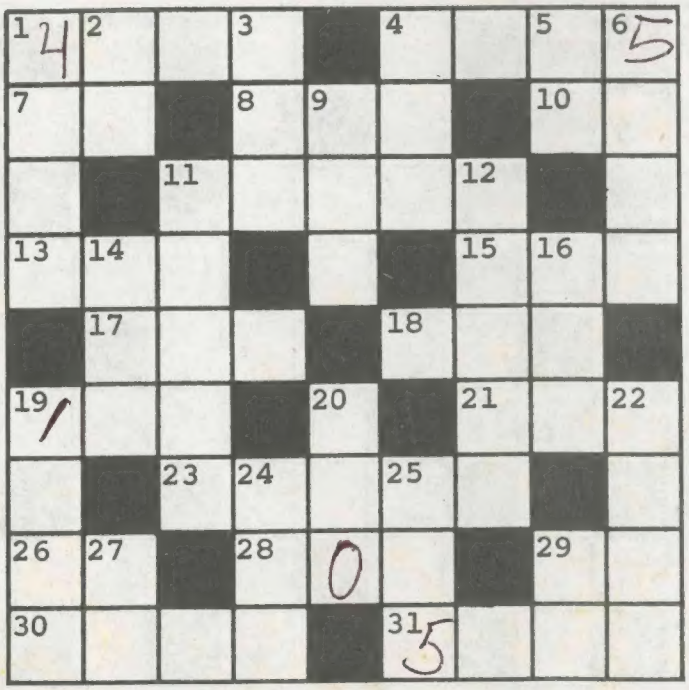


Figure Logic 8

ACROSS

2. 4-Down minus 5-Across
5. 2-Across plus 3-Down
6. Twenty times 7-Across
7. Two-thirds of 9-Across
9. One-quarter of 3-Down
11. Twice 22-Across
13. Square of 9-Down
14. 9-Across plus 12-Down
16. Three times 22-Across
18. Three times 7-Across
20. 5-Across plus 18-Across
21. Five times 5-Across
22. Fifteen more than 7-Across

DOWN

1. Seven times 2-Across
2. Two more than 2-Across
3. Twice 18-Across
4. Four consecutive digits in order
8. Square of 9-Across
9. Twenty less than 9-Across
10. Three times 2-Across
11. 2-Down plus 9-Down
12. One less than 9-Across
15. Twelve times 16-Across
17. 20-Across plus 22-Across
18. One-quarter of 17-Down
19. 5-Across minus 9-Across

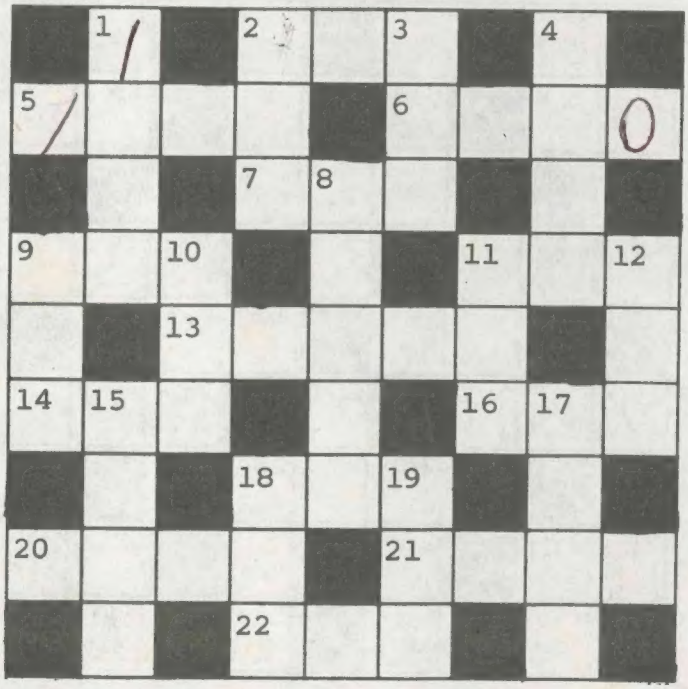


Figure Logic 9

ACROSS

1. Square of 10-Down
4. Last two digits of 10-Across
5. Four less than 20-Down
7. 6-Down plus 10-Across
8. Same digit three times
10. 10-Down minus 21-Across
12. Same digits as 15-Down in a different order
13. 4-Down multiplied by 10-Across
14. 8-Across minus 4-Down
16. Twelve times 17-Down
19. Its digits total five
21. One-seventh of 7-Across
22. 17-Down plus one-quarter of 4-Across
23. 7-Down plus 9-Down

DOWN

1. 19-Across minus 17-Down
2. Square of 22-Across
3. 4-Down multiplied by 5-Across
4. One-third of 7-Across
6. Two-thirds of 21-Across
7. Seven times 15-Down
9. 8-Across multiplied by 22-Across
10. 5-Across multiplied by 6-Down
11. Five times 4-Down
15. Three times 19-Down
17. One-fifth of 19-Across
18. 12-Across divided by 5-Across
19. 4-Across plus 18-Down
20. One less than 6-Down

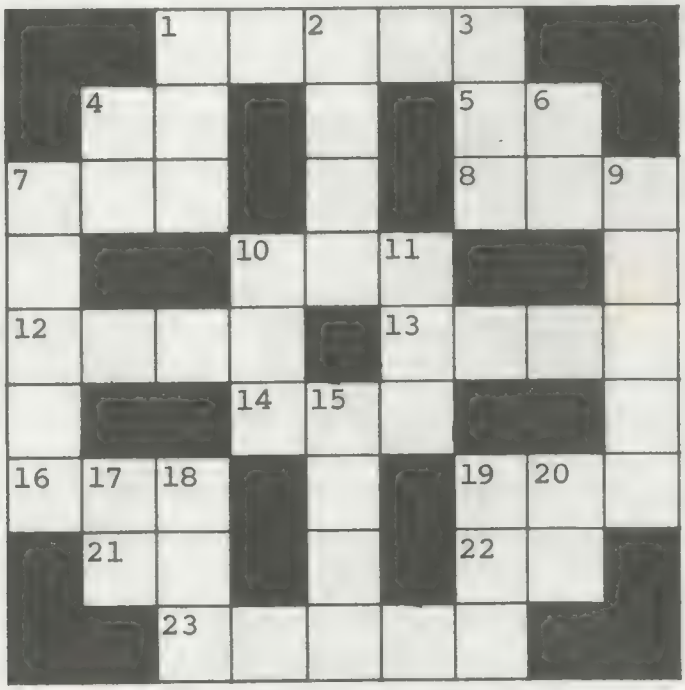


Figure Logic 10

ACROSS

1. The average of 1-Down and 3-Down
3. All digits are the same
6. Twice 5-Down
9. 8-Down plus 17-Across minus (four times 11-Down)
10. The square of 2-Down
12. Half of 18-Down
13. One seventh of 25-Down times 23-Down
14. 16-Across minus (seven times 1-Across)
15. Seven times 23-Down
16. 3-Across plus (ten times 1-Down)
17. One third of 3-Across
18. 17-Across plus 26-Across
19. 1-Down plus half of 1-Across
20. 4-Down plus 14-Down
22. One third of 1-Across times (14-Across minus 23-Down)
24. The square of 3-Down
26. 21-Down minus 17-Across
27. 25-Down minus 12-Across

DOWN

1. 3-Down plus ten
2. The square of 23-Down
3. A divisor of 3-Across
4. Three times 7-Down
5. Nine times (3-Across plus 19-Across)
7. 17-Across times 25-Down
8. One third of 23-Down times 1-Down times 3-Down
9. 11-Down plus 18-Down
11. 12-Across minus five
14. 3-Down times 24-Across
15. 13-Across times 27-Across
16. 9-Across minus 23-Down
17. 17-Across times 23-Down
18. Four times 23-Down
20. 9-Down plus one
21. Twice 3-Across
23. 26-Across divided by 3-Down
25. 15-Across minus one third of 1-Across

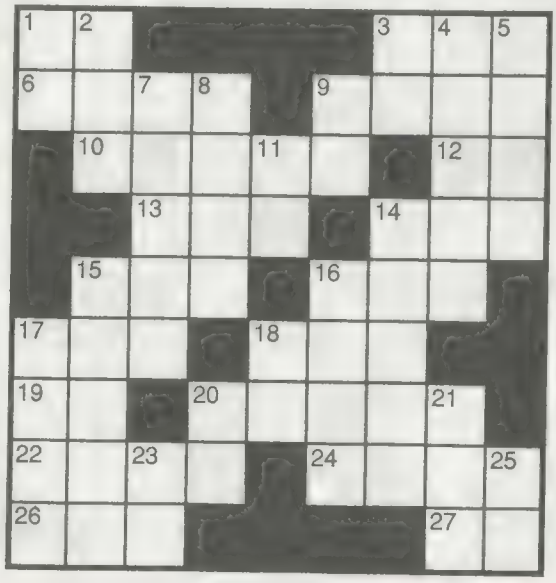


Figure Logic 11

ACROSS

1. 4-Across times 9-Across
4. 18-Across divided by 19-Down
6. One eighth of 22-Down
8. 2-Down times 25-Across
9. 11-Across divided by 6-Across
10. Half of 36-Across
11. 19-Down minus 6-Down
13. Three times 14-Across
14. Four times 25-Across
16. 21-Down times 1-Down
18. The number formed by the first two digits and the number formed by the last two digits are both multiples of 6-Across
20. 18-Across plus 19-Down
23. Twice 24-Down
25. Two thirds of 15-Down
26. Half of 1-Across
28. 36-Across plus 13-Down
30. (Twice 14-Across) minus 33-Down
31. Twice 34-Down
32. Twice 28-Across
35. 2-Down plus 9-Across
36. Half of 22-Down
37. 4-Across times 34-Down

DOWN

1. 14-Across minus 25-Across
2. 26-Down divided by 6-Across
3. 30-Across times 6-Across
4. 6-Across times 6-Down
5. Three times 21-Down
6. The square of 6-Across
7. 29-Down minus 1-Across
12. 18-Across minus (one hundred times 4-Across)
13. Half of 19-Down
14. 9-Across plus 36-Across
15. 14-Across, reversed
17. 13-Across times 25-Across
19. Four times 6-Down
21. One sixth of 7-Down
22. The square root of 18-Across
24. One third of 25-Across times 4-Across times 36-Across
26. 28-Across minus 6-Across
27. 6-Across times 35-Across
29. Consecutive digits in descending order
31. Twice 15-Down
33. 14-Across minus one
34. 28-Across divided by 6-Across

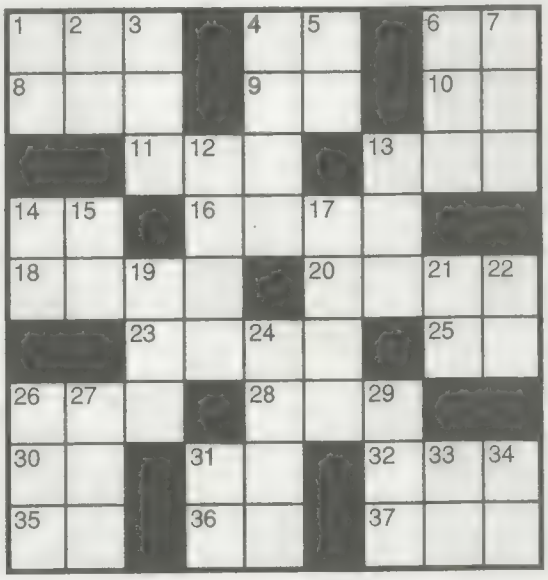


Figure Logic 12

ACROSS

1. Average of 29-Across and 27-Down
3. (5-Across minus 8-Down) divided by 11-Down
5. 14-Across times 4-Down
7. 25-Across minus twice 27-Down
9. One hundred more than 23-Across
10. One third of 25-Across
12. The first two digits of 14-Across times the last two
14. The first two digits and the last two are both perfect squares
16. 4-Down plus 27-Down
17. 1-Across plus 18-Down
18. Seven times 18-Down times 27-Down
20. 22-Across times 11-Down
22. The square root of 12-Across
23. The square of 27-Down
25. Twice 22-Across
26. The square of 23-Across
28. 7-Across minus 1-Across
29. 3-Across minus twice 10-Across

DOWN

1. One more than 29-Across
2. Four times 15-Down
3. Half of 7-Across times 9-Across
4. Three times 27-Down
6. Average of 3-Across and 26-Down
7. Half of 21-Down
8. Twice 1-Down times 20-Across
10. 14-Across times 27-Down
11. The square root of 14-Across
13. 10-Across times 11-Down
15. Half of (12-Across minus 1-Down)
18. One sixth of 6-Down
19. 3-Down minus (five times 7-Down)
20. 7-Down times 21-Down
21. 7-Across plus 10-Across
24. 16-Across plus 27-Down
26. Three times 29-Across
27. 11-Down minus 10-Across

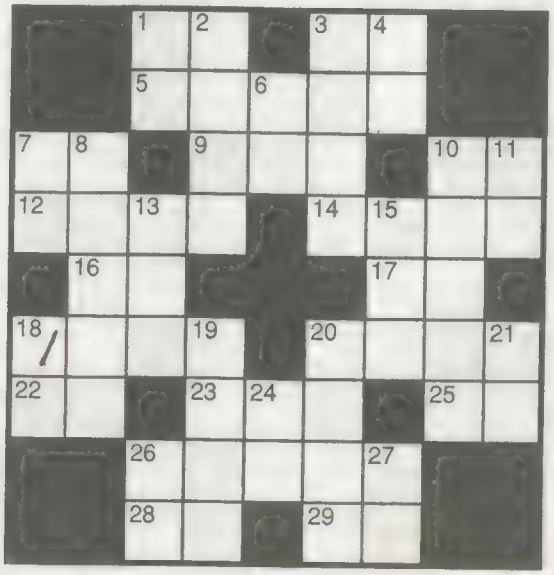


Figure Logic 13

ACROSS

1. Four times 25-Across
4. 31-Across reversed
6. 20-Across divided by 11-Across
8. 14-Down times 15-Down
9. Three times 6-Across
10. One fourth of 8-Across
11. The square of 15-Down
13. Four times 22-Down
14. Half of 9-Across
16. 11-Across times 15-Down
18. 37-Across times 34-Down
20. 11-Across plus 16-Across
23. 6-Across times 8-Across
25. Twice 14-Down
26. 31-Across times 36-Across
28. 25-Across times 31-Down
30. One third of 4-Across
31. Average of 31-Down and 36-Across
32. 5-Down times 31-Down
35. Twice 5-Down
36. 10-Across reversed
37. The square of 30-Across

DOWN

1. Average of 30-Across and 34-Down
2. 8-Across divided by 6-Across
3. The square of 14-Across
4. 36-Across times 37-Across
5. 14-Across reversed
6. The square of 6-Across
7. 1-Down times (34-Down minus 31-Down)
12. 7-Down times 31-Across
13. 14-Across times 15-Down
14. Twice 6-Across
15. One more than 5-Down
17. 3-Down times 14-Across
19. Three times 26-Across
21. Five times 15-Down
22. One more than 21-Down
24. 23-Across plus 20-Across plus 16-Across
26. 1-Across minus 5-Down
27. 1-Down times 33-Down
29. 4-Across times 5-Down
31. One sixth of 22-Down
33. Twice 36-Across
34. 6-Across plus 31-Across

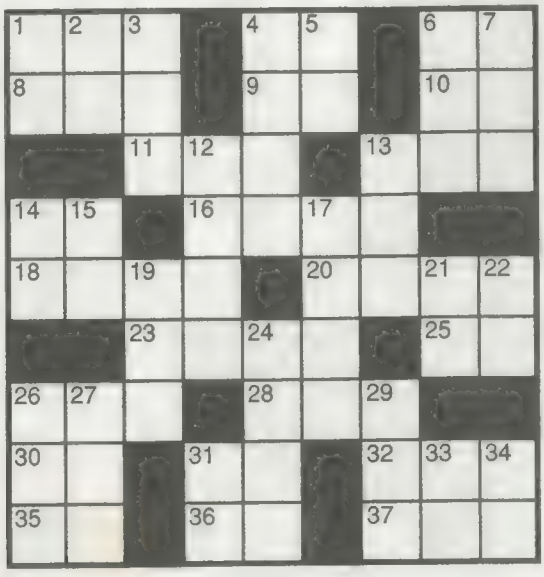


Figure Logic 14

ACROSS

1. The square root of 2-Down
3. One third of 1-Across
5. 28-Across times 20-Down
7. 3-Across plus 11-Down
9. 3-Across times 18-Down
10. ★; the square root of 20-Down
12. The square of (25-Across plus 4-Down)
14. 18-Across plus 23-Across
16. 10-Across minus 4-Down
17. Three times 18-Down
18. The square of 29-Across
20. 1-Down times 24-Down
22. 25-Across plus half of 24-Down
23. 16-Across times 24-Down
25. ★; 10-Across plus 29-Across
26. 20-Down times 24-Down
28. Average of 10-Across and 1-Down
29. ★

DOWN

1. ★
2. 25-Across times 29-Across
3. 10-Across times 25-Across
4. Half of 26-Down
6. Half of 16-Across
7. Twice 26-Down
8. Four times the square of 25-Across
10. ★; 10-Across times 20-Down
11. 21-Down minus 16-Across
13. The square of 16-Across
15. 18-Down times (1-Across minus 18-Down)
18. Average of 10-Across and 24-Down
19. 10-Across times 29-Across
20. ★; digits of 18-Across rearranged
21. 25-Across minus twice 16-Across
24. Average of 10-Across and 16-Across
26. 1-Down minus twice 16-Across
27. One more than 28-Across

★Numbers marked with a star are not prime, but each has one and only one prime factor other than 1. (A prime number is one with exactly two divisors, itself and one.)

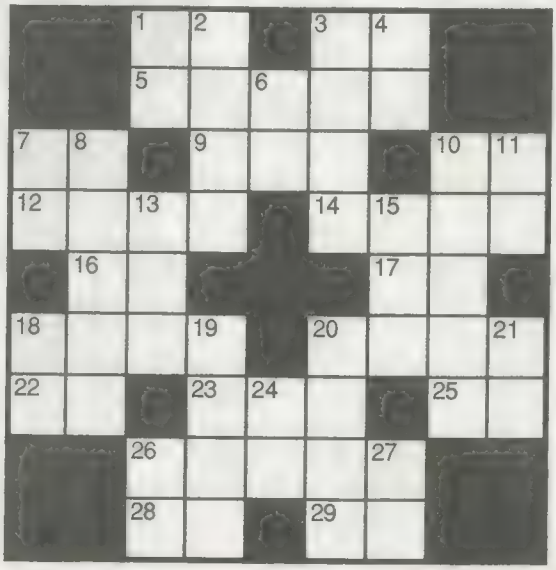


Figure Logic 15

ACROSS

1. One less than 26-Down
4. 5-Down minus 36-Across
6. Two thirds of 35-Across
8. Twice 5-Down
9. One third of 1-Down
10. Average of 30-Across and 21-Down
11. 10-Across times 31-Across
13. ★
14. 1-Down minus 9-Across
16. 4-Across times 5-Down
18. Three times 26-Down
20. ★
23. 27-Down times 31-Down
25. 13-Across divided by 22-Down
26. The square of 36-Across
28. One third of 37-Across
30. 35-Across plus 22-Down
31. Half of 10-Across
32. The square of 9-Across
35. 14-Across minus one third of 34-Down
36. One third of 5-Down
37. 35-Across times 36-Across

DOWN

1. 10-Across plus 25-Across
2. (Three times 10-Across) minus 25-Across
3. 4-Across plus 5-Down
4. 8-Across plus 16-Across
5. 25-Across plus twice 22-Down
6. One seventh of 13-Across
7. ★
12. 10-Across times 25-Across
13. ★
14. 34-Down minus 2-Down
15. 21-Down plus 35-Across
17. 19-Down times 33-Down
19. One fourth of 13-Down
21. Twice 31-Down
22. 34-Down minus twice 30-Across
24. 9-Across times 2-Down
26. ★
27. 20-Across divided by 35-Across
29. Half of 31-Across times 2-Down
31. 10-Across minus half of 30-Across
33. Half of 30-Across
34. 5-Down plus 31-Down

★In each number marked with a star, the ratio of any digit to the following digit is the same, and greater than one. The ratio, however, is not necessarily the same in all five numbers.

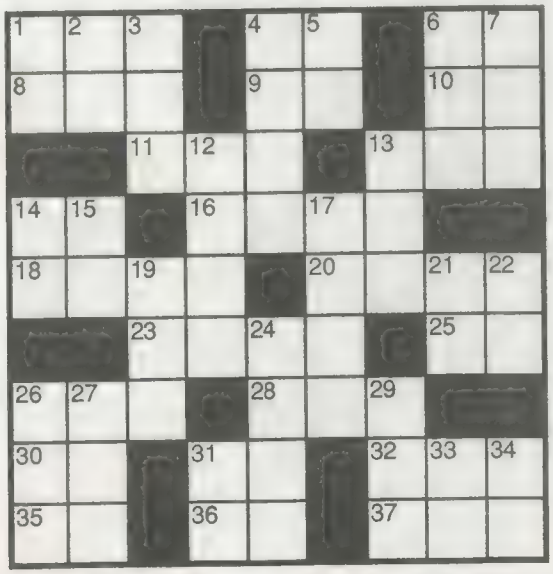


Figure Logic 16

ACROSS

1. Four times 28-Across
5. 1-Down plus 22-Down minus 4-Down
8. Consecutive digits, not in order
9. Nine times 17-Across
10. Seven times 29-Down
11. Four times 23-Across
13. 4-Down times 29-Down
15. The square of half of 22-Down
16. One sixth of 24-Down
17. Half of 16-Across
19. One third of 4-Down
21. 11-Down times the sum of 15-Across and 17-Across
23. The square of 2-Down
25. 9-Across plus twice 29-Down
28. Four times the square of 22-Down
29. Twice the square of 15-Across
30. 17-Across times 19-Across
31. Ten more than 10% of 18-Down

DOWN

1. Seven times 15-Across
2. Twice 4-Down
3. One eighth of 8-Across times 4-Down
4. The square of this is 8-Across
5. Four times the sum of 17-Across and 19-Across
6. 19-Across times 25-Across
7. The square of 17-Across
11. 16-Across minus 22-Down
12. 31-Across plus 19-Down
14. 4-Down times 19-Across
18. 11-Across plus 28-Across
19. Half of 8-Across
20. Digits of 19-Down, rearranged
22. 1-Down minus 10-Across
24. All digits the same
26. 25-Across minus half of 24-Down
27. 22-Down times the difference between 4-Down and 22-Down
29. 16-Across, reversed

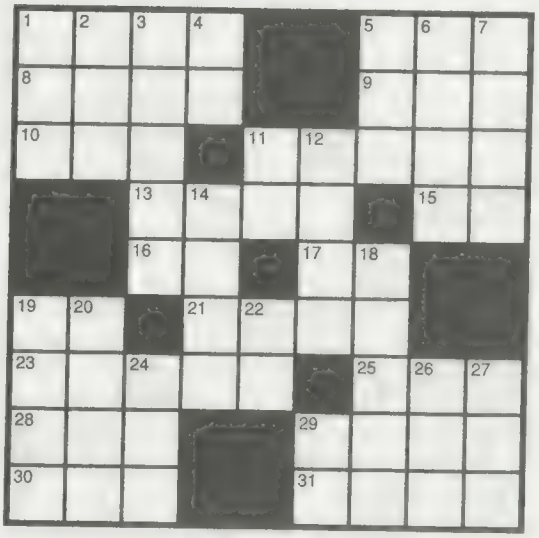


Figure Logic 17

ACROSS

1. One third of 11-Down
3. *
6. 25-Across times 4-Down
8. One fourth of 29-Across
9. 18-Across, reversed
10. Eight times 24-Across
12. 3-Down divided by 1-Down
14. 9-Across times 23-Down
16. The square of 28-Down
17. 9-Across plus 18-Across
18. 16-Down divided by 1-Down
19. *
21. 7-Down times 15-Down
24. 21-Down plus twice 1-Across
25. 6-Down, minus nine times 9-Across
26. Twice 19-Down
27. Four times 25-Across
29. The square of 17-Across
31. Half of 3-Down
32. Twice 18-Across

DOWN

1. The square of this number is 3-Across
2. Twice 18-Down
3. 3-Across plus 1-Down
4. Twice 11-Down, minus 17-Across
5. 26-Across times 19-Down
6. 1-Across times 11-Down
7. Half of 6-Down
11. Twice 1-Down
13. 17-Across plus 21-Down
15. This number has only one prime divisor
16. Consecutive integers, in order
18. 3-Down times 11-Down
19. A divisor of 19-Across
20. Seven times 19-Across
21. 125% of 17-Across
22. 12-Across times 19-Down
23. Twice 19-Across
25. One fourth of 8-Across
28. 11-Down minus 12-Across
30. Eight times 1-Across

All possible different rearrangements of the digits in 16-Down are in this puzzle; two of them are indicated by *.

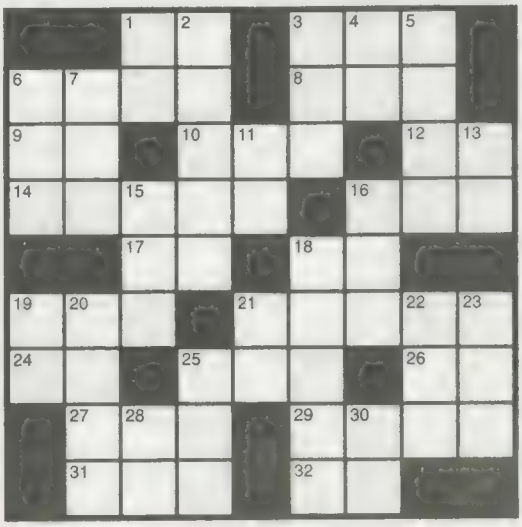


Figure Logic 18

ACROSS

1. 35-Across times 34-Down
4. Eight times 34-Down
6. Two less than 9-Across
8. Five times 22-Down
9. The sum of the digits is three
10. Twice the difference between 31-Down and 6-Across
11. 14-Down times 34-Down
13. 26-Across minus 4-Across
14. 4-Across minus one third of 33-Down
16. 5-Down times 6-Down
18. 9-Across times 29-Down
20. 4-Across times 14-Down
23. 9-Across times 19-Down
25. 6-Across plus 30-Across
26. 5-Down times 34-Down
28. Seven times 14-Down
30. Four times 6-Across
31. 11-Across minus 7-Down
32. 9-Across times itself
35. 14-Down minus 34-Down
36. 10-Across plus half of 30-Across
37. 32-Across minus 6-Across

DOWN

1. Twice 33-Down
2. 35-Across minus 6-Across
3. Seven times 31-Down
4. 32-Across times 9-Across
5. 29-Down minus 14-Down
6. Seven times 6-Across
7. One third of 21-Down, times 33-Down
12. 6-Down times 36-Across
13. Nine times 35-Across
14. Twice 1-Down, minus 22-Down
15. 4-Across minus 30-Across
17. 29-Down times 34-Down
19. 9-Across times 34-Down
21. 4-Across, reversed
22. 35-Across plus one third of 33-Down
24. Twice the sum of 18-Across and 17-Down
26. 9-Across times 31-Down
27. 6-Across times itself
29. 32-Across, reversed
31. Half of 36-Across
33. Twice 9-Across
34. This number times itself is 29-Down

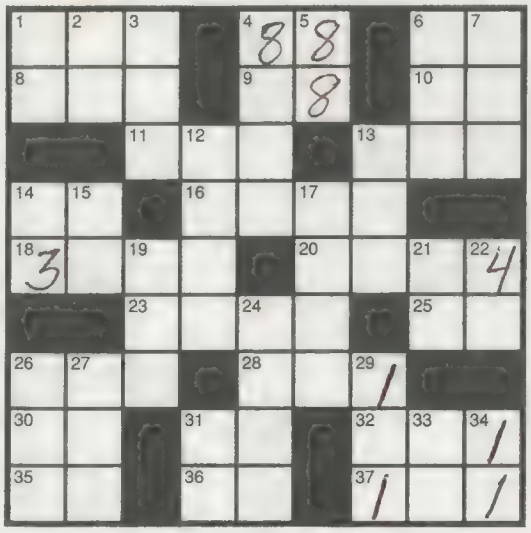


Figure Logic 19

ACROSS

1. 11-Down times 19-Across
5. One less than three times 16-Across
8. Seven times 15-Across times 11-Down
9. Consecutive odd digits, not in order
10. Three less than 24-Down
11. 5-Down times itself
13. The sum of the first two digits equals the product of last two
15. Twice 25-Across divided by 17-Across
16. Twice 11-Down
17. One-third of 4-Down
19. Three less than 16-Across
21. One-fourth of 7-Down
23. 24-Down times itself
25. One less than 5-Across
28. Half of 10-Across times 15-Across
29. 15-Across times the difference between 1-Down and 10-Across
30. Thirty more than 5-Across
31. One-ninth of 11-Across

DOWN

1. 5-Down plus half of 25-Across
2. 1-Down plus 5-Across minus 15-Across
3. 11-Across plus 23-Across
4. 22-Down plus one-fifth of 29-Down
5. 25-Across minus 11-Down
6. 19-Across times the difference between 19-Across and 15-Across
7. 16-Across times itself
11. Its second digit is one less than its first
12. Consecutive digits, not in order
14. 22-Down times the difference between 10-Across and 15-Across
18. 11-Across minus 23-Across
19. 17-Across times 25-Across
20. Twice 21-Across
22. Twice 16-Across, minus 19-Across
24. One less than half of 25-Across
26. Twice 30-Across
27. 13-Across divided by 15-Across
29. 10-Across minus 22-Down

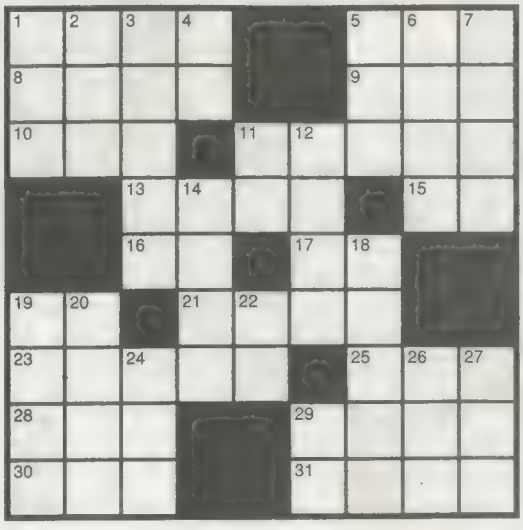


Figure Logic 20

ACROSS

1. Twice 5-Across
3. One-third of 1-Across
5. A square
7. The square of 2-Down
9. 5-Across plus 23-Down
10. One-sixth of 15-Across
11. (Nine times 9-Across) minus 3-Across
13. Seven times 21-Down
14. 28-Across times 23-Down
15. 18-Across times 12-Down
17. 1-Down minus 5-Down
18. A square
20. Half of 21-Down times 10-Down
21. The square of 5-Across
23. 1-Across minus 23-Down
24. 21-Across plus (twice 10-Across)
26. (Twice 8-Down) minus 21-Down
27. (Twice 23-Down) minus 25-Down
28. Twice 23-Across

DOWN

1. 21-Down times (20-Across plus 6-Down)
2. The square of 19-Down
3. One-third of 10-Down
4. Half of 16-Down
5. 13-Across times 23-Down
6. Four times 19-Down
8. 150% of 23-Across
10. 18-Across minus (one-third of 5-Across)
12. Six times 18-Across
14. Twice the sum of 10-Down and 25-Down
15. (Six times 10-Down) minus 19-Down
16. 1-Across times 21-Across
17. 14-Across plus (four times 22-Down)
18. 11-Across times 21-Down
19. A square
21. Half of 27-Across
22. The square root of 4-Down
23. (Twice 28-Across) minus 13-Across
25. 1-Across minus 3-Across

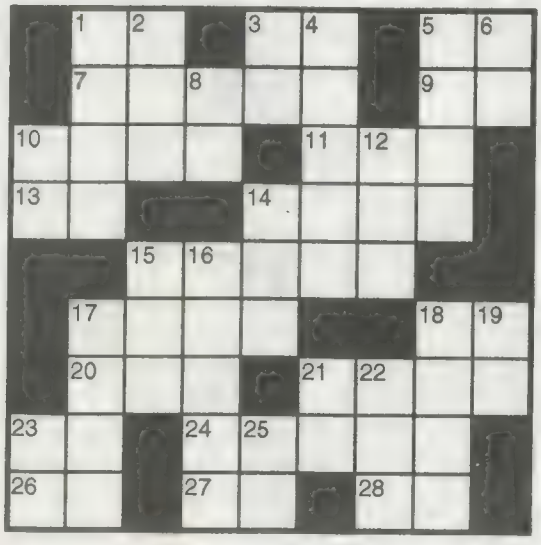


Figure Logic 21

ACROSS

1. (Twice 26-Across) minus 11-Down
3. Half of 19-Down times 26-Across
6. 14-Across minus (ten times 19-Across)
8. The square of 21-Down
9. 8-Across minus twice 13-Down
10. The square of 11-Down
12. Three times 1-Across
14. 25-Across times 11-Down
16. One-sixth of 9-Across times 32-Across
17. 1-Across plus 4-Down
18. (Twice 12-Across) minus 4-Down
19. Six times 12-Across
21. 25-Across times 26-Across
24. Twice 32-Across
25. 10-Across reversed, plus three
26. The square root of 25-Across
27. Three times 28-Down
29. 32-Across times 7-Down
31. Seven times 17-Across
32. 19-Down minus 1-Across

DOWN

1. The average of 26-Across and 11-Down
2. 10-Across times 11-Down
3. Five times 12-Across
4. 13-Down plus 30-Down
5. 3-Across times 26-Across
6. 16-Down plus (ten times 17-Across)
7. 1-Across times 26-Across
11. A square
13. Three times 32-Across
15. 1-Down times 21-Down
16. The square of 32-Across
18. 21-Across plus (six times 5-Down)
19. Half of 4-Down
20. The square of 17-Across
21. Half of 1-Down
22. (26-Across times 27-Across) divided by 32-Across
23. 31-Across plus (six times 26-Across)
25. 26-Across times 11-Down
28. Three times 13-Down
30. Half of 18-Across

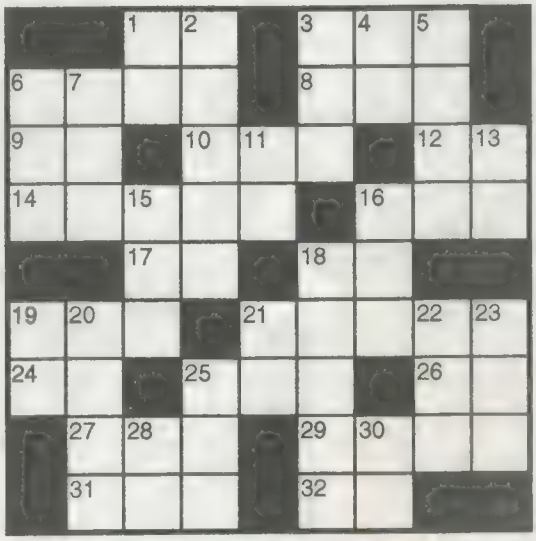


Figure Logic 22

ACROSS

1. Two more than 4-Across
4. All digits the same
7. 4-Across times 11-Across
8. Four times 34-Across
10. One third of 28-Across
11. Four more than 29-Across
13. Five times 5-Down
14. 12-Down times 29-Across
15. Four times 5-Down, times 29-Across
17. Three times 33-Down, times the difference between 28-Across and 16-Down
19. 1-Across times 2-Down
21. Twice 11-Across times 31-Down
23. 20-Down minus 14-Across
27. Twice 29-Across
28. Two less than 27-Across
29. One third of 4-Across
30. 1-Across times 10-Across
32. 29-Across times the sum of 21-Down and 33-Down
34. 35-Across plus half of 10-Across
35. Seven times 33-Down

DOWN

1. Nine times 31-Down, plus 12-Down
2. 16-Down, reversed
3. 13-Across times 29-Across
4. 4-Across times itself
5. Two more than 19-Down
6. 11-Across times itself
7. Fives times 13-Across
9. Consecutive digits, in order
12. 29-Across times itself
16. Three times 5-Down
18. 11-Across times 29-Across
19. Four less than 31-Down
20. 6-Down times 11-Across
21. One hundred more than 28-Across
22. 27-Across times itself
24. Twice 5-Down times the sum of 21-Down and 28-Across
25. 17-Across plus 1-Across plus 4-Across plus 10-Across
26. Nine times 33-Down
31. Twice 5-Down, minus 2-Down
33. 19-Down plus twice 11-Across

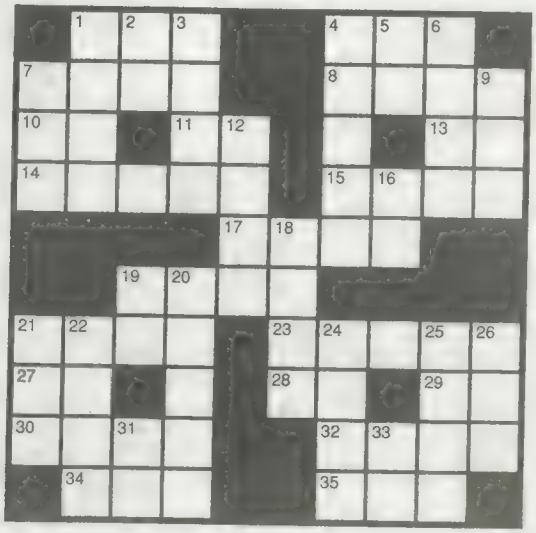


Figure Logic 23

ACROSS

1. 10-Down minus 16-Down
5. 26-Across minus twice 19-Across
6. Four times 5-Across
8. 22-Across, plus five times 5-Down
9. Five times 22-Across
11. 8-Down divided by 19-Across
12. One-third of 13-Across
13. The second digit is three times the first
14. 5-Across times 26-Across
17. 12-Across, reversed
19. Two more than 17-Across
20. Square of 17-Across
22. Square of 13-Across
24. Half of 5-Across, times 19-Across
25. Square of 12-Across
26. 12-Across, plus nine times 17-Across
27. One fourth of 26-Across, times 11-Across

DOWN

1. Twice 13-Across times 26-Across
2. 25-Across, reversed
3. 16-Down minus 12-Across minus 13-Across
4. Twice 7-Down
5. 7-Down minus half of 5-Across
7. 12-Across times 17-Across
8. 1-Across plus 7-Down
10. 13-Across times 22-Across
12. 5-Across minus 19-Across
15. Four times 19-Across, times 7-Down
16. 17-Across times 20-Across
18. This reads the same backwards as forwards
21. 5-Across, reversed
23. 12-Down plus one-fourth of 26-Across
24. 5-Down plus 17-Across

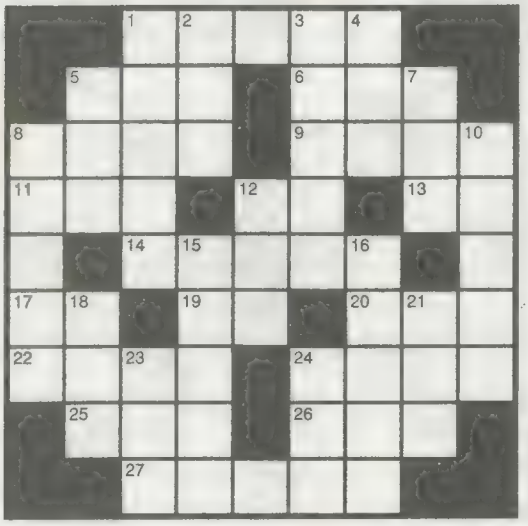


Figure Logic 24

ACROSS

1. One fifth of 16-Across
3. Eight times 1-Across
5. 14-Across times 11-Down
7. Three times 25-Across
9. 22-Across times 1-Across
10. Four times 1-Down
12. 9-Across times 22-Across
14. 4-Down plus the product of 100 and 1-Down
16. 11-Down plus 25-Across
17. 7-Across plus 25-Across
18. 4-Down times 11-Down
20. 22-Across times the difference between 4-Down and 25-Across
22. 7-Across reversed
23. One third of 24-Down times 28-Across
25. 11-Down reversed
26. Half of 24-Down times 18-Across
28. Square root of 19-Down
29. 1-Down plus 24-Down

DOWN

1. A perfect square
2. 12-Across minus the product of 11-Down and twice 16-Across
3. 14-Across plus the product of ten and 15-Down
4. A perfect square
6. 10-Across plus 18-Down
7. Twice 26-Down
8. 14-Across times 25-Across
10. 5-Across minus the product of five and 10-Across
11. Square root of 14-Across
13. 1-Across times 18-Down
15. 1-Down times 11-Down
18. Half of 10-Across
19. 1-Down times 4-Down
20. Half of 29-Across times the sum of 1-Across and 3-Across
21. Twice 7-Across
24. 4-Down reversed
26. 18-Down reversed
27. Twice the sum of 22-Across and 26-Down

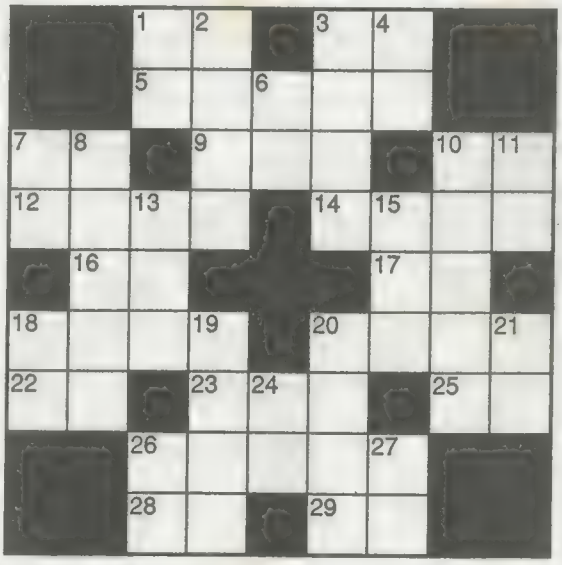


Figure Logic 25

ACROSS

1. 11-Down, minus three times 3-Down
3. Twice 14-Across, minus 27-Across
6. Twice 15-Across
9. 1-Across times 3-Across, plus 11-Down, minus 18-Across
10. 18-Across times 9-Down
12. 1-Down plus twice 25-Down
13. Six times 25-Down
14. The first and last digits are the same
15. 1-Down times 11-Down
16. Nine times the sum of 19-Across and 27-Across
17. 1-Down times 20-Down
18. The first and last digits are the same
19. 25-Down minus 23-Down
20. 12-Across times 15-Across
22. 3-Down times 20-Down
24. 22-Across times 20-Down, divided by 23-Down
26. 18-Across minus 18-Down, minus 1-Across
27. One third of 12-Across

DOWN

1. Square root of 14-Across
2. 16-Down divided by 23-Down
3. Average of 1-Down and 27-Across
4. Four times 1-Across times 16-Across times 25-Down, divided by 20-Down
5. 14-Across times 1-Down
7. Five times 10-Across, minus 14-Down
8. Half of 11-Down times 18-Down
9. Square root of 18-Across
11. 18-Down reversed
14. Eight times 5-Down
15. Nine times 12-Across, times the sum of 27-Across and 11-Down
16. Square of 11-Down
17. 1-Across times the difference between 26-Across and 25-Down
18. Three times 9-Down, minus 1-Down
20. 27-Across plus 25-Down
21. 17-Across plus 1-Down
23. Average of 1-Down and 3-Down
25. 18-Down minus 9-Down

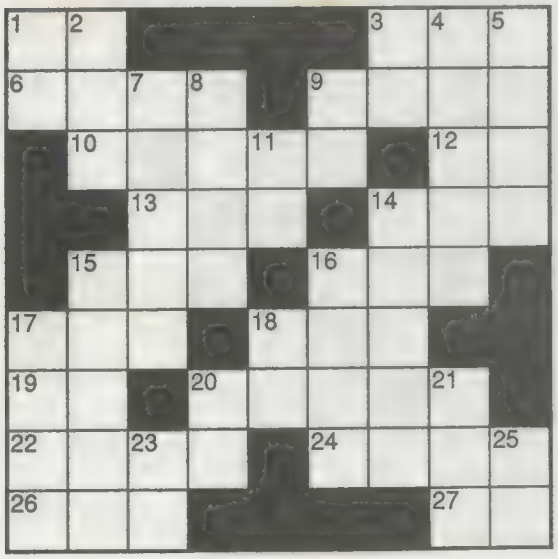


Figure Logic 26

ACROSS

1. Four consecutive digits in ascending order
5. Four digits, not necessarily consecutive, in ascending order
9. 5-Down times 6-Down
10. Twice 5-Across
11. Twice 6-Down
12. Square of 13-Down
14. Square root of 17-Down
15. 6-Down times 21-Down
17. Eight times 6-Down
18. Number of 7s that appear in the correct solution grid
19. Digit sum of 19-Down
20. 19-Across times 13-Down
22. A number that reads the same forward and backward
25. 22-Across divided by 5-Across
26. The last digit is the product of the first two digits
27. Sum of 6-Down and 22-Down
28. Sum of 9-Across and 14-Across
30. 14-Across times 17-Down
32. Sum of 9-Across and 5-Down
33. 17-Across times its own last digit

DOWN

1. Square of 11-Across
2. 1-Down reversed
3. Multiple of 18-Across
4. Square of 17-Down
5. Square root of 19-Down
6. Square root of 5-Across
7. Digits of 5-Across rearranged
8. Four consecutive digits in descending order
13. Square root of 12-Across
16. 11-Across times 18-Across
17. Square of 14-Across
19. Square of 5-Down
20. 9-Across minus 12-Across
21. Three more than 33-Across
22. See 27-Across
23. Digits of 33-Across rearranged
24. Four times the product of 13-Down and 22-Down
26. 1-Across minus 1-Down
29. Digit product of 12-Across
31. Sum of 11-Across and 13-Down

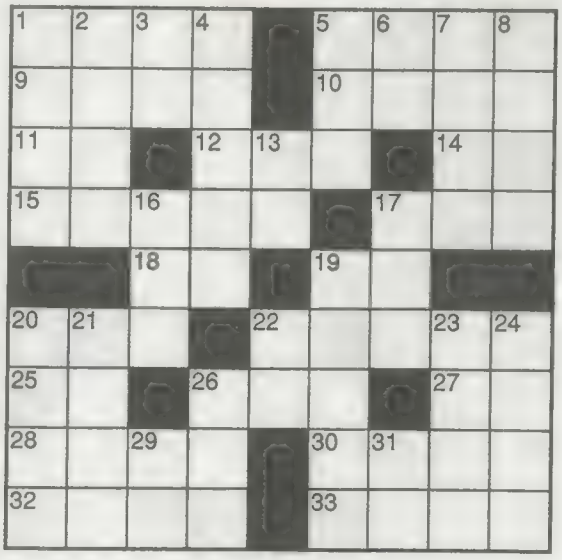


Figure Logic 27

ACROSS

1. Four different digits in ascending order, no two of which are consecutive
5. 8-Down minus 13-Across
8. 27-Across times 17-Down
9. 10-Across times 30-Across
10. See 17-Down
11. Half of the product of 13-Across and 27-Across
13. Square root of 1-Across
14. 9-Across minus 10-Across
16. 1-Across plus 8-Across
18. Square root of 24-Across
20. Multiple of 18-Across
21. Square of the product of 30-Across and 5-Down
24. 19-Down reversed
27. Product of the digits of 3-Down
28. 24-Across minus 32-Down
30. Average of 5-Down and 32-Down
31. 10-Across times 13-Across
33. 10-Across times 22-Down
35. First digit of 24-Across times its last two digits
36. 1-Across plus 28-Across

DOWN

1. Four consecutive digits in ascending order
2. Multiple of 30-Across
3. Half of 1-Down
4. 30-Across times 3-Down
5. 18-Across reversed
6. 4-Down minus 1-Down
7. 5-Down times 17-Down
8. See 5-Across
12. 10-Across reversed times 10-Across
15. Multiple of 32-Down
17. Square of 10-Across
19. Square of 5-Down
21. 14-Across times 5-Down
22. Four consecutive digits, not in order
23. 21-Down minus 5-Down
25. 7-Down minus 12-Down
26. Average of 29-Down and 34-Down
29. Multiple of 34-Down
32. Sum of the digits of 21-Across
34. A perfect square

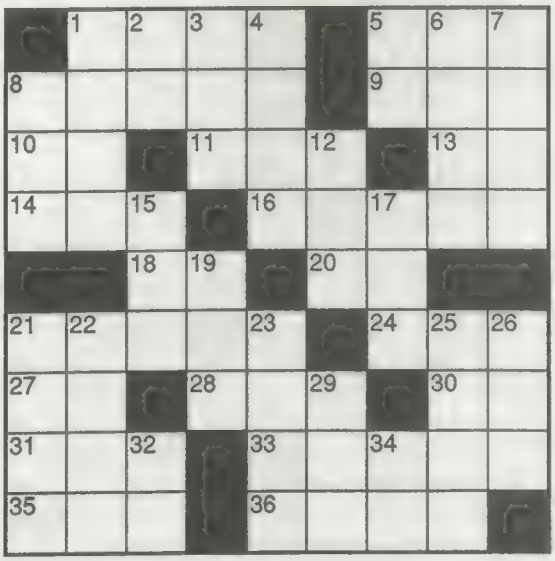


Figure Logic 28

ACROSS

1. Digits of 9-Down rearranged
4. 7-Down minus 26-Across
7. Multiple of 2-Down
8. Multiple of 9-Down that reads the same forward and back
10. Four times 13-Across
11. Four times 28-Down
13. Average of 2-Down and 5-Down
14. 7-Down plus 2-Down
16. Square of 28-Down
17. 19-Down times 30-Down
18. 32-Across, plus three times 5-Down
20. Twice 18-Across, minus 32-Across
23. 10-Across minus twice 28-Down
24. Average of 1-Across and 20-Across
26. 15-Down divided by 2-Down
27. Four times 23-Across, times 5-Down
29. 17-Across divided by 26-Across
31. Six times 26-Across
32. One eighth of 1-Across times 30-Down

DOWN

1. Square of 5-Down
2. 8-Across divided by 9-Down
3. Digits of 24-Across rearranged
4. 4-Across minus one third of 30-Down
5. Two adjacent digits of 8-Across
6. 23-Across times 30-Down
7. Square of 13-Across
9. Square of 2-Down
12. 16-Across times 28-Down
15. 10-Across plus 14-Across
16. 16-Across minus 13-Across
18. Ten more than 18-Across
19. 26-Across times 28-Down
21. 1-Down plus 14-Across
22. Seven times 5-Down
24. Six times 10-Across
25. Seven times 28-Down
28. 26-Across minus 13-Across
30. Two less than 26-Across

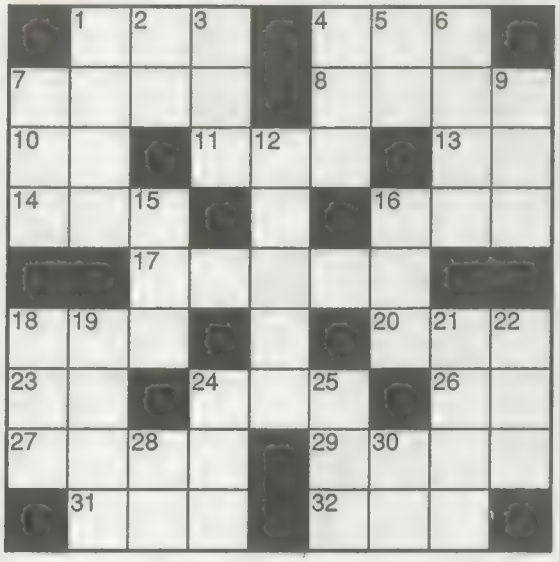


Figure Logic 29

ACROSS

1. 20-Across divided by 2-Down
4. Half the difference between 5-Down and 1-Down
6. 4-Across minus 31-Across
8. One third of 24-Down
9. 32-Across minus 3-Down
10. One eighth of 1-Across
11. 14-Across times 5-Down
13. 9-Across plus twice 4-Across
14. Half of 4-Across
16. 22-Down times 26-Down
18. 13-Across times one third of 2-Down
20. Twice 24-Down; consecutive digits in order
23. 35-Across times 2-Down
25. Average of 1-Down and 31-Down
26. 1-Across plus 31-Down
28. 1-Across times half of 31-Across
30. Twice 1-Down
31. Square root of 13-Down
32. 31-Down times 34-Down
35. Three times 1-Down
36. Three times 4-Across
37. Four times 25-Across, plus 6-Down

DOWN

1. Three more than 31-Across
2. 1-Down plus 31-Across
3. Three times 12-Down, divided by 2-Down
4. 13-Across times twice 14-Down
5. One more than 22-Down
6. 22-Down plus 35-Across
7. Seven times 5-Down
12. 20-Across plus 17-Down
13. Sum of all the divisors of 22-Down
14. One sixth of 22-Down
15. 35-Across minus 1-Down
17. Digits of 20-Across rearranged
19. 14-Across times 34-Down
21. Three times 31-Down
22. Square root of 17-Down
24. 31-Across times 13-Down
26. 9-Across plus 5-Down
27. 1-Down times 2-Down
29. Three times 2-Down, times 14-Down
31. One seventh of 13-Across
33. One third of 6-Down
34. 22-Down minus 14-Down

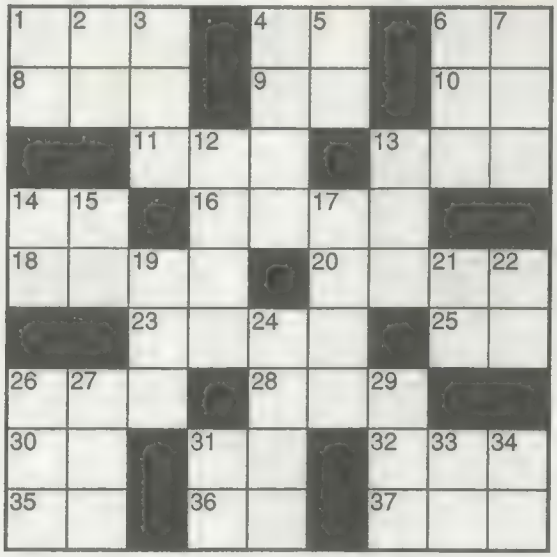


Figure Logic 30

ACROSS

1. 16-Across times the difference between 22-Down and 29-Down
5. 4-Down times 29-Down
8. 22-Down times 27-Down
9. 29-Across minus 31-Across
10. 11-Down times 16-Across
11. 19-Across times 25-Across
13. (Three times 9-Across) minus five times 22-Down
15. Midway between 4-Down and 22-Down
16. 22-Down reversed
17. 15-Across plus 29-Down
19. 26-Down divided by 4-Down
21. 11-Down times 24-Down
23. 25-Across times 22-Down
25. 27-Down reversed; not the same as 27-Down
28. 15-Across times 29-Down
29. The second two digits is twice the first two digits
30. 3-Down divided by 22-Down
31. Three of the digits are the same

DOWN

1. 14-Down divided by the difference between 30-Across and 2-Down
2. 23-Across minus 11-Across
3. 31-Across times 4-Down
4. The square root of 27-Down
5. 16-Across plus one-fourth of 9-Across
6. 8-Across minus ten times 17-Across
7. 15-Across times 16-Across
11. One-third the sum of 4-Down and 29-Down
12. (6-Down plus 31-Across) minus five times 16-Across
14. 13-Across plus seven times 15-Across
18. 17-Across times 31-Across
19. 16-Across times 22-Down
20. 15-Across plus (one-fourth of 9-Across times 22-Down)
22. The square of this is 31-Across
24. Three times 5-Across
26. 30-Across minus 4-Down
27. The first three digits of 31-Across
29. The square root of 25-Across

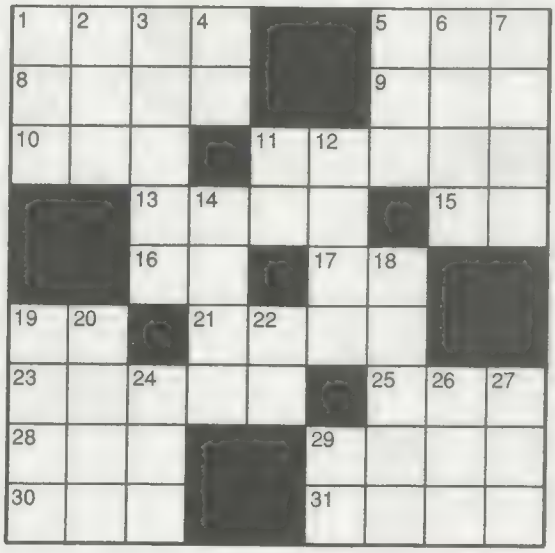


Figure Logic 31

ACROSS

1. Half of 3-Down
4. Five less than 26-Down
6. 9-Across plus eight times 19-Across
9. Eight times 4-Across
10. Half of 4-Across
11. 27-Across minus 6-Across
12. 15-Across times 19-Down
14. 25-Across times 26-Down
15. 4-Across plus 26-Down
16. 19-Down times 26-Down
18. 21-Across times 26-Across
19. Both digits are the same
21. 19-Across times 21-Down
23. Nine times 4-Across times the sum of 3-Down and 26-Down
25. Half of 10-Across times 29-Across
26. Four less than 29-Across
27. The square of 4-Across
28. 4-Across plus ten times 19-Across
29. Ten more than 4-Across
30. 11-Across plus twice 19-Across

DOWN

1. 7-Down plus 19-Down
2. One-eighth of 10-Across times 26-Across times 29-Across
3. Four times 15-Across
4. 27-Across times 4-Across
5. Six times 10-Across
6. One-fourth of 8-Down times 15-Across
7. 1-Across plus five times 19-Across
8. Six times 29-Across
13. One less than one-third of the square of 5-Down
14. Half of 28-Across times 21-Down
17. 1-Across times 27-Across
18. 6-Across times 10-Across
19. The square of 26-Down
20. The square of 29-Across
21. The square of 19-Across
22. 19-Across times 26-Down
24. One-sixth of 28-Across times 29-Across
26. Three times 19-Across

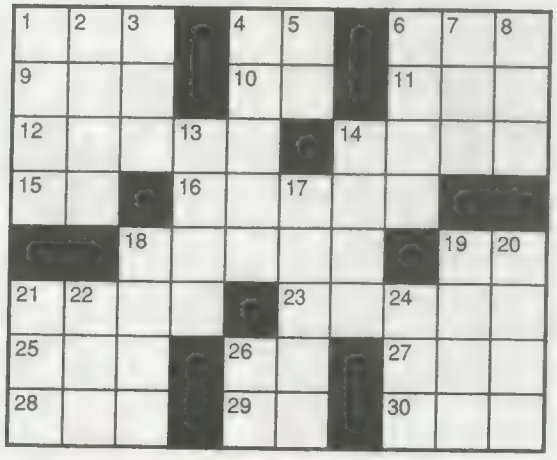


Figure Logic 32

ACROSS

1. 1-Down times 16-Across
5. Four times 26-Down
8. Five times the difference between 2-Down and 22-Down
9. 16-Across times 19-Across
10. 22-Down times 16-Across
11. 1-Across times 16-Across
13. Three times 31-Across
15. 22-Down plus 29-Down
16. The sum of its digits is four
17. Six less than 15-Across
19. 17-Across reversed
21. Ten times 10-Across
23. 8-Across times 19-Across
25. Three times 17-Across
28. One-fifth of 4-Down times 19-Across
29. 15-Across times 17-Across
30. Its last digit is the sum of its first two
31. 3-Down divided by 16-Across

DOWN

1. 29-Across minus 14-Down
2. 29-Down plus ten times 17-Across
3. The square of 26-Down
4. 19-Across plus six times 16-Across
5. 5-Across minus 29-Down
6. 20-Down plus 29-Down
7. 11-Down times 25-Across
11. Four more than 22-Down
12. Three times 11-Down times 22-Down
14. Seven times 2-Down
18. 15-Across times 1-Down
19. 1-Across minus 4-Down
20. 22-Down times the square of 19-Across
22. 29-Down reversed
24. Nine times 17-Across
26. The square of 16-Across
27. 16-Across times 11-Down
29. Four times 16-Across

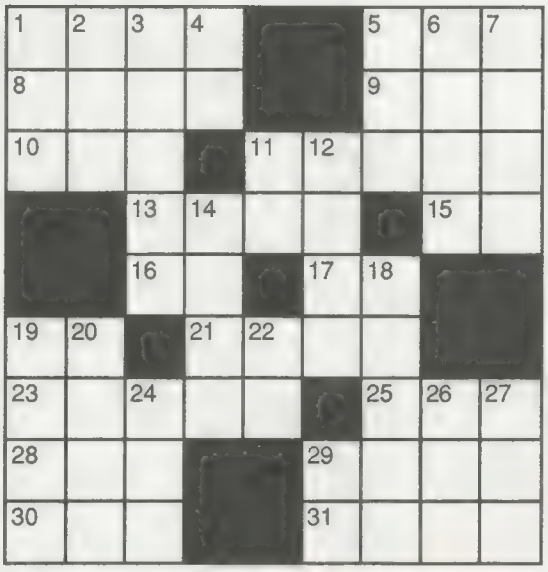


Figure Logic 33

ACROSS

1. Three times 20-Across times 2-Down times 12-Across divided by eight
5. Five times 19-Down
8. One-third of 16-Down times 24-Across
9. Two times 5-Across
10. 27-Across minus two times 20-Across
11. 16-Down minus 5-Down
12. The square root of 14-Down
13. 26-Down plus 27-Across plus 28-Across
15. Two times 33-Across
18. 27-Across reversed
20. This number squared is 29-Down
21. 13-Across times 18-Across
24. Consecutive digits, going down
27. The last two digits of 21-Down
28. 18-Across minus 32-Down
30. One less than 11-Across
31. 13-Across minus 16-Down
33. 10-Across times 13-Across
35. The square of 32-Down
36. The square of 18-Across

DOWN

1. The square of 19-Down
2. Three times 11-Across divided by two
3. 5-Down times 20-Across
4. Four times 24-Across
5. 19-Down minus 34-Down
6. (Half the difference between 3-Down and 34-Down) times 5-Down
7. 18-Across times 27-Across
8. Six times 30-Across
14. One-fourth of 23-Down
16. One-ninth of 17-Down
17. 24-Across minus 8-Down
19. One less than 27-Across
21. The square of 27-Across
22. Nine times 13-Across
23. The square of 34-Down
25. One-fourth of 11-Across times (9-Across plus 12-Across)
26. 5-Across plus 14-Down
29. The first three digits of 23-Down
32. Half of 10-Across
34. Half of 27-Across

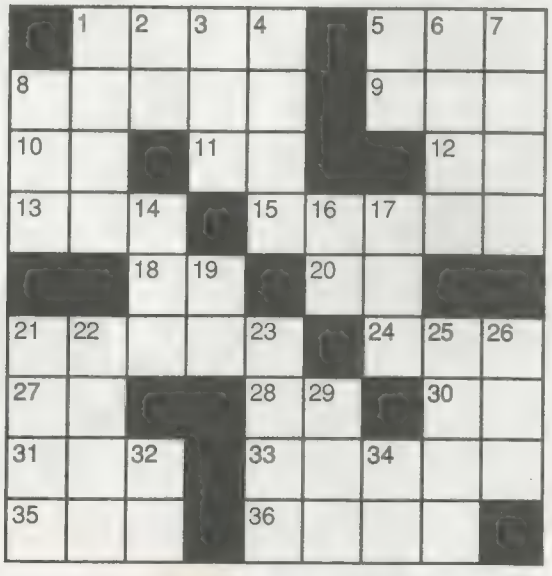


Figure Logic 34

ACROSS

1. The square of 1-Down
4. 10-Across, reversed
6. 4-Across minus half of 5-Down
8. 13-Across, plus half of 6-Across times 9-Down
10. One less than 1-Down
11. 29-Across, plus five times 4-Across
12. One fourth of 2-Down
13. Half of 9-Down times 16-Down, minus 18-Down
16. One fourth of 28-Across
17. 5-Down, reversed
18. All the digits of this and 1-Across are different
21. Twice 12-Across
22. 2-Down plus one fifth of 4-Down
24. 2-Down minus half of 6-Across
25. 11-Across times 20-Down
28. One less than 17-Across
29. Twice 6-Across
30. Half of 1-Down times 27-Down

DOWN

1. 14-Down divided by 20-Down
2. 1-Across minus five times 16-Across
3. 150% of 1-Down times 4-Across
4. 10-Across times 16-Down, plus 20-Down
5. One third of 25-Down
6. 21-Across times 29-Across, plus half of 16-Across
7. Half of 16-Across times 10-Across times 5-Down
9. Half of 14-Down
14. The square of 1-Across
15. Three times 16-Down
16. 26-Down minus twice 1-Down
18. Twice 20-Down
19. Five times 1-Down times 26-Down
20. 18-Across divided by 1-Across
23. Twice 1-Down times 5-Down
25. Twice 16-Down
26. 22-Across divided by 10-Across
27. Five times 10-Across

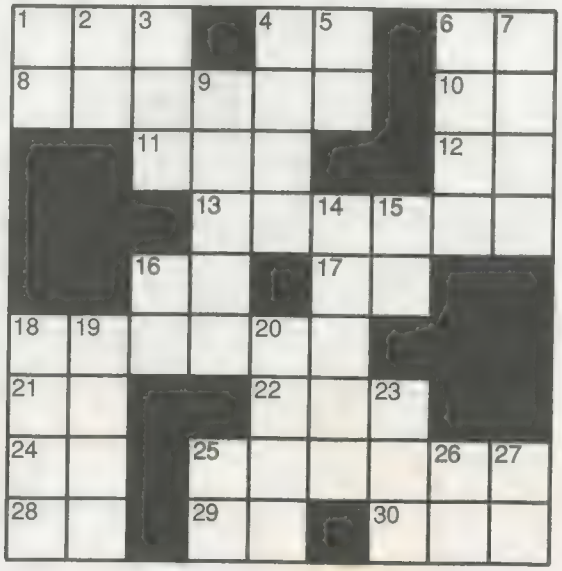


Figure Logic 35

ACROSS

1. Half of 11-Down
3. 1-Down times 19-Across
6. 150% of 23-Down times the difference of 2-Down and 19-Across
9. 10-Across divided by 9-Down
10. The square of 2-Down
12. Four times 1-Across
13. 1-Across times 11-Down
14. The square of 27-Across
15. One fifth of 14-Across
16. 17-Across, minus seven times 19-Across
17. 27-Across times 9-Down
18. Four times the sum of 1-Down and 19-Across
19. Two more than 9-Down
20. Four times 15-Down
22. The square of 25-Down
24. 22-Across times 18-Down divided by 27-Across
26. Four times 16-Across
27. 19-Across plus half of 1-Down

DOWN

1. 19-Across plus 9-Down
2. The square of 9-Down
3. Three times 9-Down
4. 1-Down times its square
5. 3-Down times 20-Down
7. 10-Across plus 16-Across
8. The difference of 23-Down and 9-Down times the sum of 12-Across and 25-Down
9. See 9-Across
11. 1-Down, reversed
14. Two thirds of the difference of 24-Across and 16-Down, times 18-Down
15. 9-Across times 19-Across
16. 9-Across plus 25-Down
17. 19-Across times its square
18. One fifth of 25-Down
20. Five times 19-Across
21. Three times 12-Across
23. Twice 19-Across
25. 12-Across plus 9-Down

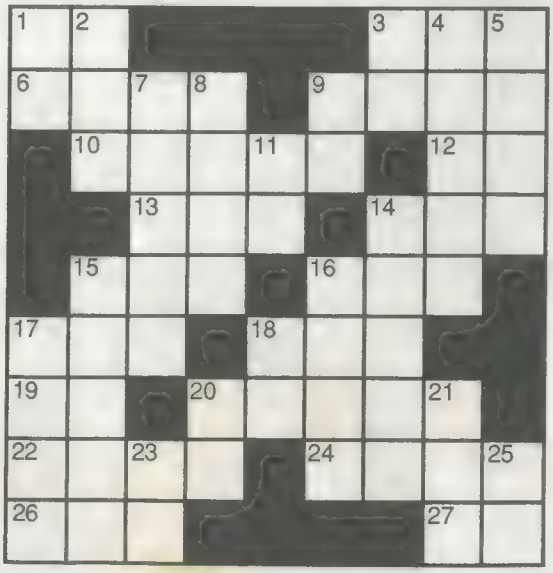


Figure Logic 36

ACROSS

1. Twice 3-Across
3. 27-Across minus 13-Across
5. 1-Across minus 3-Across
7. Seven times 5-Down
9. Consecutive integers, in order
10. One seventh of 17-Down
11. Twice the sum of 20-Across and 3-Down
13. Five times 8-Down
14. 5-Across times 12-Down, minus four times 3-Down
15. 1-Across times 21-Across
17. 4-Down minus 7-Across
18. 3-Across plus 8-Down
20. 14-Down minus 1-Across minus 5-Across
21. 24-Across divided by 8-Down
23. One less than 23-Down
24. The square of 22-Down
26. The square of this is 17-Down
27. Twice 23-Across
28. 27-Across plus 10-Down

DOWN

1. 9-Across times 19-Down
2. 8-Down times 10-Down
3. Sum of the digits of 7-Across
4. 24-Across minus 7-Across
5. The square of 23-Across
6. One third of 9-Across
8. 10-Across divided by 26-Across
10. Midway between 1-Across and 3-Down
12. Consecutive integers, in order
14. One more than 12-Down
15. Five times 25-Down
16. Three times 24-Across, minus 26-Across times 10-Down
17. Number formed by the first two digits is one more than that formed by the last two
18. 21-Across, plus 3-Across times 13-Across
19. One fifth of 14-Down
21. 23-Across minus 8-Down
22. The square of 8-Down
23. Three times 8-Down
25. 27-Across plus 3-Down

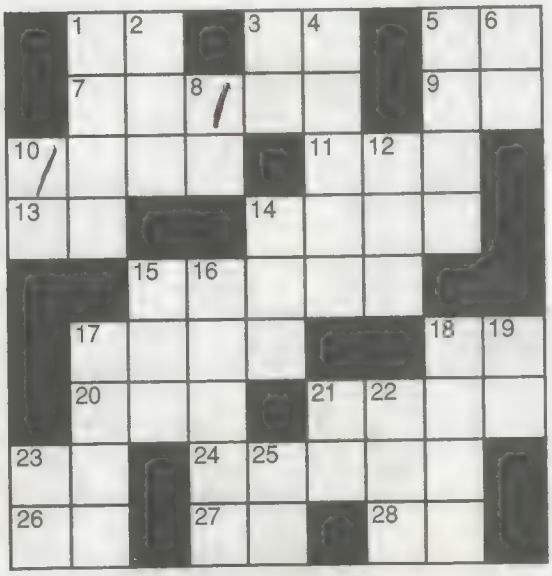


Figure Logic 37

ACROSS

1. Sum of the digits of 13-Down
3. 13-Down divided by 26-Down
7. Half of 5-Down
8. One fourth of 9-Down times 3-Across
10. Three times 24-Across, minus 3-Down
11. 21-Down times 26-Down
12. Half of 19-Across
15. One more than 3-Down
16. 15-Across plus 24-Across
17. 3-Down plus 15-Across
19. 3-Down times 25-Across
21. 29-Across plus 20-Down plus 21-Down
24. Three times 26-Down
25. Consecutive digits, in order
27. One fourth of 9-Down times 15-Across
28. 2-Down, plus half of 7-Across times 3-Down
29. Five times 15-Across

DOWN

1. 15-Across times 7-Down
2. The square of 21-Down
3. Two thirds of 1-Across
4. Sum of its digits is twice 15-Across
5. Half of 21-Down times 15-Across
6. 14-Down plus 21-Down
7. 1-Across times 17-Across, plus 14-Down
9. Its digits are the same
13. Consecutive digits, in order
14. 3-Down times 9-Down, minus 27-Across
17. 3-Across times 15-Across
18. 1-Across plus 15-Across plus 26-Down plus five times 28-Across
20. 4-Down divided by the product of 1-Across and 3-Down
21. 9-Down minus four times 3-Down
22. One eighth of 9-Down times 1-Across
23. 3-Down times 21-Down
26. Twice 21-Down

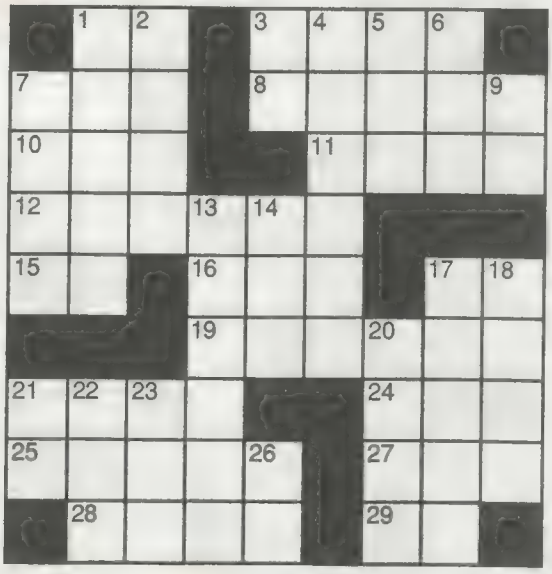


Figure Logic 38

ACROSS

1. One third of 19-Down
4. Average of 2-Down and 21-Down
6. 9-Across minus 34-Down
8. 19-Down minus 11-Across
9. Three times 5-Down
10. Average of 31-Across and 34-Down
11. Three times 30-Across
13. Six times the sum of 4-Across and 6-Across
14. 1-Down minus 5-Down
16. 1-Across times 5-Down
18. 19-Down plus 32-Across
20. The square of 4-Across
23. One third of 21-Down times 20-Across
25. Twice 2-Down
26. The square of 21-Down
28. Half of 1-Down times 2-Down
30. 31-Across plus 36-Across
31. Half of 22-Down
32. Twice 33-Down
35. One third of 6-Across
36. 24-Down divided by 33-Down
37. Half of 24-Down

DOWN

1. One more than 2-Down
2. 9-Across minus 1-Down
3. 10-Across times 35-Across
4. One third of 31-Down times 6-Down
5. A perfect square
6. The square of 10-Across
7. One third of 36-Across times 10-Across
12. 1-Down times 25-Across
13. 36-Across times 5-Down
14. 1-Down minus 21-Down
15. 9-Across minus 22-Down
17. 11-Across times 36-Across
19. 2-Down times 21-Down
21. Two more than 5-Down
22. Four times 14-Down
24. 19-Down plus 26-Across
26. Three times 1-Down times 14-Across divided by two
27. One third of 21-Down times 10-Across
29. One third of 36-Across times the difference between 9-Across and 31-Across
31. (Twice 34-Down) minus 21-Down
33. The square root of 23-Across
34. One fourth of 33-Down

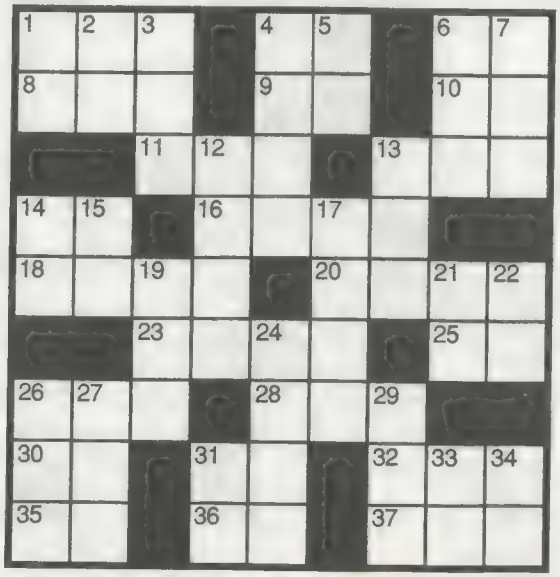


Figure Logic 39

ACROSS

1. 17-Down divided by 9-Across
4. Half of 1-Across
6. Twice 35-Across
8. 1-Down times 10-Across
9. A divisor of 3-Down
10. 1-Down plus 31-Down
11. 9-Across times 15-Down
13. The square of 35-Across
14. 25-Across plus twice 9-Across
16. See note
18. 3-Down times 31-Across
20. 4-Down minus 17-Down
23. Half of 17-Down
25. 1-Down plus half of 2-Down
26. 25-Across times the difference between 21-Down and 2-Down
28. 3-Down minus 31-Across
30. 22-Down minus 31-Across
31. 7-Down divided by 9-Across
32. 8-Across minus 11-Across
35. 28-Across divided by 2-Down
36. Four times 15-Down
37. 35-Across times 21-Down

DOWN

1. One third of 36-Across
2. 29-Down divided by 1-Down
3. An odd divisor of both 16-Across and 17-Down
4. More than 12-Down
5. Three times 25-Across
6. Twice 27-Down
7. One fourth of 16-Across
12. More than 17-Down
13. Four times 10-Across
14. Half of 2-Down times 15-Down
15. 6-Across minus 2-Down
17. More than 16-Across
19. 8-Across minus 6-Across
21. 36-Across minus 1-Down
22. Three times 31-Across
24. Half of 12-Down
26. The square of 31-Across
27. Consecutive digits, in order
29. Twice 1-Across
31. Half of 36-Across
33. Half of 28-Across
34. 30-Across minus 1-Down

Note on 16-Across, 4-Down, 12-Down, and 17-Down: No digit is 0 or 1; all four digits are different; the number formed by the first two digits is divisible by 2, by the first three digits is divisible by 3; the whole number is divisible by 4. Each begins with a different digit. The four numbers are as small as possible subject to the above conditions.

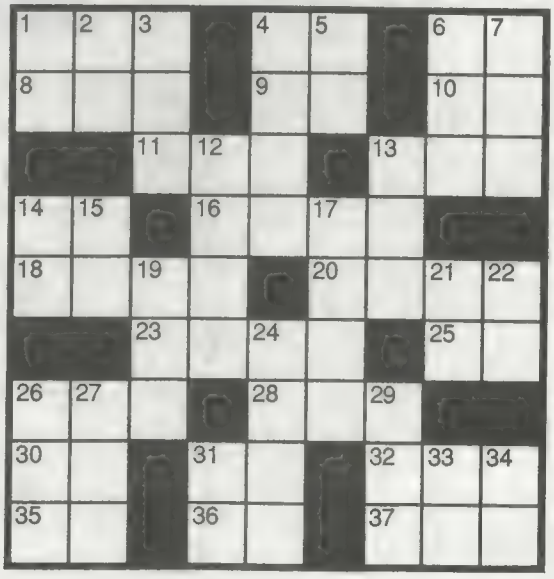


Figure Logic 40

ACROSS

1. Half of 19-Across
3. Four times 11-Down times 12-Across
6. Nine times 15-Across
9. 7-Down divided by 18-Down
10. Sum of the first two digits equals the sum of the last three
12. The square root of 18-Across
13. Consecutive integers, in order
14. 16-Across plus four times 9-Down
15. The square root of 7-Down
16. 9-Down times 25-Down
17. (20-Down times 25-Down) minus 1-Across
18. The square root of 10-Across
19. 18-Down plus 25-Down
20. 15-Across times 18-Across
22. The sum of 17-Down, 3-Across, 1-Down, and 18-Down
24. 12-Across times 21-Down
26. 23-Down times 1-Down
27. Five times 11-Down

DOWN

1. 25-Down minus 12-Across
2. One more than 3-Across
3. Half of 12-Across times 18-Down
4. 16-Across times 3-Down
5. 12-Across times 18-Across
7. Sum of the digits is the same as that of 10-Across
8. 15-Across plus twice 16-Across
9. Twice 18-Down
11. Two less than 1-Across
14. 17-Across times 3-Down
15. 12-Across times 19-Across times 9-Down
16. Half of 15-Down
17. 1-Across times 9-Down times 11-Down
18. The square root of 15-Across
20. Twice 11-Down
21. (Half of 3-Across) minus 19-Across
23. Three times 25-Down
25. One less than 9-Down

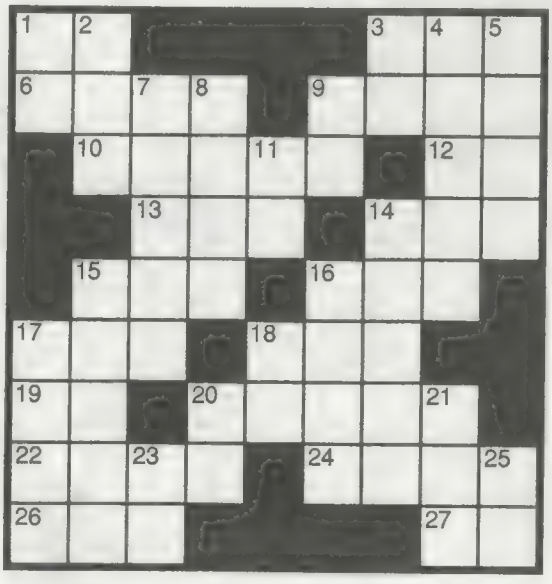


Figure Logic 41

ACROSS

1. 30-Down minus (four times 32-Across)
3. 32-Across times 11-Down
6. Seven times 8-Across
8. 7-Down minus 32-Across
9. 6-Across divided by 30-Down
10. The square of 21-Down
12. 26-Across minus 9-Across
14. 16-Across times 28-Down
16. 13-Down times 21-Down
17. 1-Across plus 13-Down
18. Twice 13-Down
19. Four times 25-Across
21. 11-Down times 22-Down
24. 1-Down plus 9-Across
25. 32-Across plus 4-Down
26. 21-Across divided by 10-Across
27. 13-Down times 19-Down
29. 3-Down times 11-Down
31. (Three times 24-Across) minus 1-Down
32. One less than 13-Down

DOWN

1. 18-Across minus 32-Across
2. Half of 1-Across times 17-Across times 25-Across
3. The square of 13-Down
4. Five times 13-Down
5. 1-Down times 15-Down
6. Half of 23-Down
7. The square of 1-Across
11. Twice 21-Down
13. Sum of the digits of 21-Across
15. 13-Down times 32-Across
16. 1-Across times 21-Down
18. (Three times 21-Across) minus (half of 1-Across times 10-Across)
19. Average of 9-Across and 17-Across
20. 12-Across times 25-Down
21. One-eighth of 26-Across
22. The square of 11-Down
23. Half of 32-Across times 30-Down
25. Three times 9-Across
28. Three times 1-Across
30. 1-Down plus 28-Down

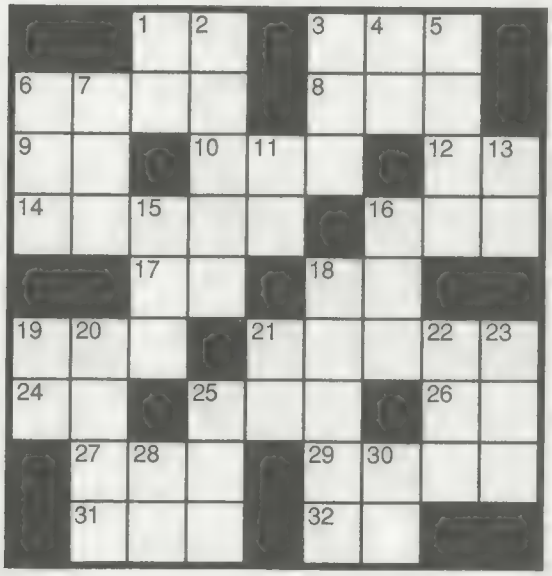


Figure Logic 42

ACROSS

1. 21-Across divided by 11-Across
5. First and last digits are the same
8. 10-Across times 8-Down
9. The square of 19-Down
10. 34-Down plus one third of 28-Across
11. One third of 18-Across
12. Twice 30-Across
13. Nine times 29-Down
15. 5-Down times 7-Down
18. 32-Down reversed
20. 16-Down reversed
21. The square of 8-Down
24. 30-Across times 5-Down
27. 18-Across minus 11-Across
28. (Twice 18-Across) minus 5-Down
30. One more than 20-Across
31. The square of 5-Down
33. The square of 26-Down
35. Consecutive digits in descending order
36. 22-Down plus 31-Across plus 5-Down

DOWN

1. Twice 5-Down times 29-Down
2. Seven times 16-Down
3. Three less than 9-Across
4. 33-Across divided by 32-Down
5. 19-Down reversed
6. 2-Down times 34-Down
7. 9-Across times 11-Across
8. The square of 11-Across
14. Five times 20-Across
16. One more than 19-Down
17. 30-Across times 16-Down
19. 5-Across divided by 5-Down
21. (One third of 8-Across) minus 27-Across
22. (Half of 25-Down) minus twice 29-Down
23. 11-Across times 29-Down
25. 30-Across times the difference between 8-Down and 34-Down
26. The square of 32-Down
29. 3-Down minus 30-Across
32. 35-Across divided by 18-Across
34. Four times 32-Down

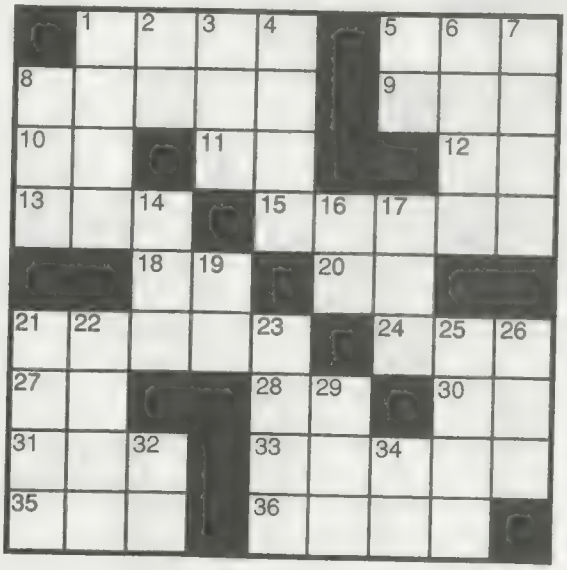


Figure Logic 43

ACROSS

1. Two less than 9-Across
3. 4-Down times 9-Across
6. X
8. 31-Across minus 21-Down minus 18-Across
9. 1-Down reversed
10. 12-Across times 18-Across
12. One more than 13-Down
14. 1-Across times 25-Across
16. Y; consecutive integers
17. 1-Down plus 9-Across
18. One fourth of the sum of 1-Across and 9-Across
19. Seven times 26-Across
21. 12-Across times 16-Across
24. Half of 32-Across
25. Y
26. 1-Down plus 30-Down
27. X; consecutive odd integers
29. Y
31. Nine times 12-Across
32. 1-Across plus half of 21-Down

DOWN

1. Half of 30-Down
2. All digits different and odd
3. X; largest possible number that meets the conditions
4. 13-Down minus 18-Across minus 9-Across
5. 20-Down minus 16-Down
6. 27-Across plus twice 32-Across
7. One third of 29-Across
11. Twice 26-Across
13. Four times 1-Across
15. 26-Across times 1-Down
16. 6-Across divided by 9-Across
18. 9-Across times 27-Across
19. 26-Across minus half of 21-Down
20. The square of 13-Down
21. Three times 18-Across
22. Seven times 1-Across
23. 28-Down plus (9-Across times 18-Across)
25. 27-Across minus twice 18-Across
28. 25-Across divided by 1-Down
30. 16-Across divided by 1-Across

The three numbers marked X between them contain all ten digits, as do the three numbers marked Y. The sum of the digits is the same in all six. Each number in the X set is the largest possible arrangement of its digits; each number in the Y set is the smallest possible arrangement of its digits (no number begins with zero). For the 3-digit numbers in X or Y, no pair of digits appears twice.

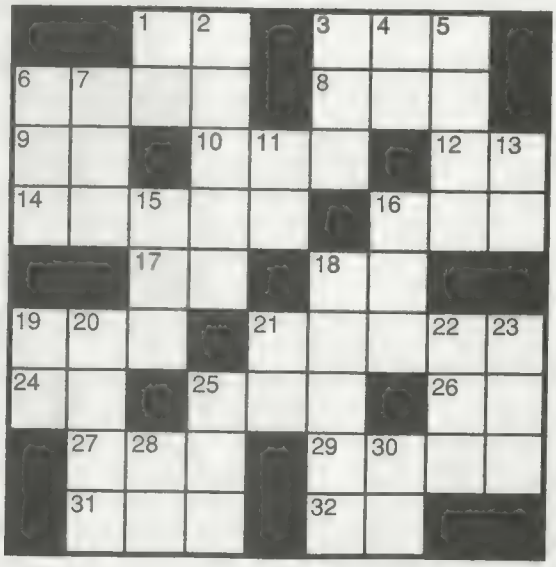


Figure Logic 44

ACROSS

1. 9-Across times 35-Across
4. One more than 14-Across
6. 14-Across plus twice 34-Down
8. The square of 35-Across
9. 36-Across plus 33-Down
10. 18-Across divided by 36-Across
11. 31-Across times 34-Down
13. 37-Across minus 35-Across
14. 10-Across minus 31-Across
16. The square of 4-Across
18. Consecutive digits in order
20. Half of 34-Down times 37-Across
23. 14-Across times 14-Down
25. Seven times 33-Down
26. 10-Across times 33-Down
28. (Three times 9-Across) minus 33-Down
30. Midway between 14-Across and 14-Down
31. One third of 10-Across
32. Three times 31-Down
35. 36-Across minus 14-Across
36. 31-Down reversed
37. Four times 21-Down

DOWN

1. 36-Across plus 34-Down
2. 10-Across minus (three times 15-Down)
3. Half of 33-Down times 4-Across
4. The square of 9-Across
5. Half of 14-Down
6. The sum of its digits is 15-Down
7. 15-Down times 31-Across
12. 21-Down times 25-Across
13. 15-Down times 35-Across
14. Half of 2-Down times 35-Across
15. 31-Down minus 33-Down
17. (22-Down times 37-Across) plus 4-Across
19. 2-Down times 25-Across
21. Seven times 35-Across
22. Twice 33-Down
24. 9-Across times 32-Across
26. The square of 31-Across
27. 31-Across times 35-Across
29. 9-Across times 35-Across
31. 6-Down divided by 15-Down
33. 10-Across minus 9-Across
34. Two thirds of 15-Down

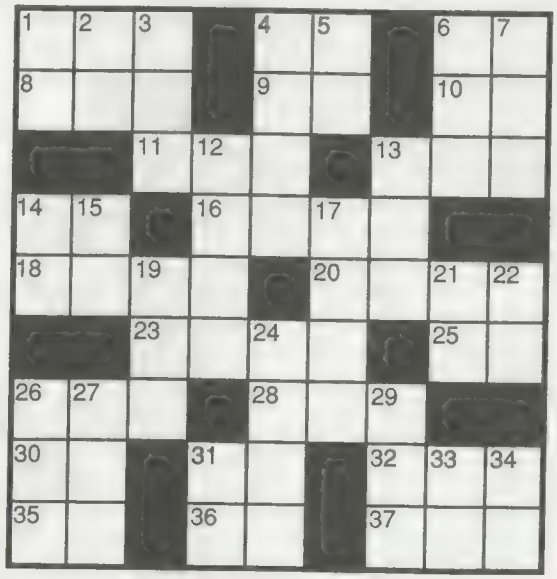


Figure Logic 45

ACROSS

1. Consecutive digits in order
4. 13-Across divided by 33-Down
6. A divisor of 3-Down
8. Five times 27-Down
9. Twice 14-Across
10. 9-Across plus 14-Across
11. 31-Across times 36-Across
13. Consecutive digits in order
14. 1-Across divided by 25-Across
16. 18-Across plus 37-Across
18. Six times the difference between 29-Down and 6-Across
20. (27-Down times 34-Down) minus 19-Down
23. 14-Down times 19-Down
25. The square root of 29-Down
26. 19-Down plus (four times 34-Down)
28. 26-Across plus 13-Down
30. Four times 25-Across
31. (Twice 5-Down) minus 14-Across
32. Twice the square of 14-Across
35. 31-Across plus 21-Down
36. 2-Down reversed
37. 33-Down times 34-Down

DOWN

1. Twice 25-Across
2. Twice 33-Down
3. 37-Across minus 5-Down
4. 9-Across times the sum of 1-Down and 22-Down
5. One third of 2-Down
6. 2-Down times 22-Down
7. 14-Down times 35-Across
12. 1-Across times 22-Down
13. Nine times the difference between 6-Across and 31-Down
14. Midway between 21-Down and 22-Down
15. Twice 36-Across
17. Four times 4-Down
19. One fourth of 1-Across
21. Half of 25-Across
22. 9-Across minus 25-Across
24. 37-Across times 14-Down
26. Four times 6-Across
27. The square of 14-Down
29. One of the six different numbers in this puzzle with the same digits
31. 9-Across minus 25-Across
33. 14-Down plus 22-Down
34. 14-Down plus 21-Down

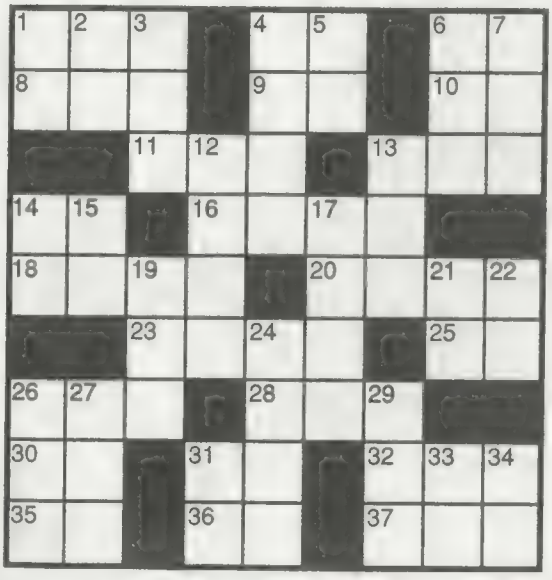


Figure Logic 46

ACROSS

1. One digit is both the sum and the product of the others; each digit is smaller than the preceding one
5. 25-Across times 55-Across
9. A palindrome
12. Different even digits
13. 37-Down times 46-Down
15. See 17-Across
16. A square
17. 9-Across plus 15-Across
18. The square of 16-Across
20. Successive digits of 1-Across
21. 11-Down times 14-Down
23. 1-Across divided by 20-Across
24. The square root of 17-Across
25. The square of 55-Across
26. See 31-Down
28. 1-Across times 49-Across
30. 13-Across plus 36-Across
33. 20-Across times (16-Across plus 59-Down)
34. The first two digits minus the last two is 59-Down
36. See 30-Across
39. 55-Across times 58-Across
42. The square of 49-Across
43. Consecutive digits in order
44. Each digit is a square
45. 55-Across times 46-Down
47. 9-Across times 22-Down
49. This has only one prime factor
50. 20-Across times (55-Across plus 19-Down)
52. A multiple of 16-Across
53. A multiple of 55-Across
55. 62-Across divided by 43-Across
56. A multiple of 6-Down
58. 9-Across times 17-Across
60. 54-Down plus 57-Down
61. 11-Down minus 15-Across
62. This and 39-Across together contain all ten digits

DOWN

1. 49-Across times 19-Down
2. See 17-Down
3. 18-Across rearranged
4. 1-Across divided by 16-Across
6. 9-Across times 24-Across
7. 28-Across plus 38-Down
8. 16-Across plus 20-Across
10. 49-Across times 1-Down
11. Successive digits of 28-Across
14. See 21-Across
17. The square of 2-Down
19. See 1-Down
20. 16-Across times 19-Down
21. 15-Across plus 37-Down
22. 20-Across plus 42-Across
24. 9-Across times 15-Across
25. 14-Down times 31-Down
27. 55-Across times 56-Across
29. 17-Across minus 46-Down
31. 26-Across plus 37-Down
32. 22-Down plus 40-Down
35. 42-Across times 49-Across
37. See 21-Down
38. 12-Across times 15-Across
39. The first two digits is the sum of all the digits
40. 23-Across plus 43-Across
41. 19-Down times 39-Down
45. 61-Across plus 24-Down
46. See 29-Down
48. 34-Across rearranged
49. The square of 19-Down
51. 16-Across plus 55-Across
53. A multiple of 16-Across
54. See 60-Across
57. 9-Across minus 8-Down
59. 20-Across plus 24-Across

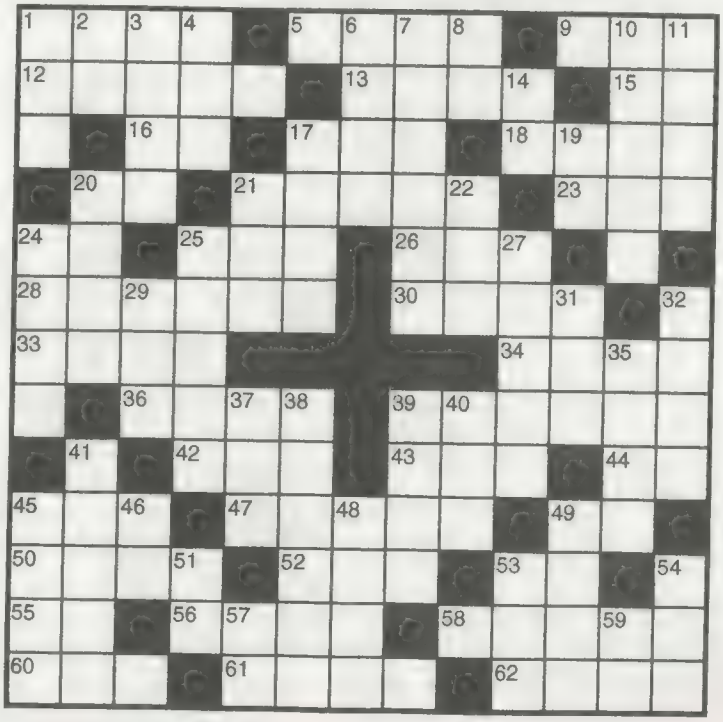


Figure Logic 47

ACROSS

1. Ten less than 61-Down
3. Square of 16-Across
6. Square of 66-Across
9. Last digits of 65-Across
11. 52-Across plus 63-Down
13. 53-Across minus 38-Across
15. One-fourth of 6-Across
16. 62-Across minus 30-Across
17. Three different even digits in some order
18. Half of 59-Across
19. 1-Across times 10-Down
21. The sum of its digits is 31-Down
23. Ten less than 6-Across
25. One hundred more than 58-Down
27. 23-Across minus 31-Down
28. Half of 27-Across
29. 69-Across plus 63-Down
30. Two-thirds of 66-Across
32. 25-Across plus 62-Across
34. Twenty-nine times 69-Across
36. Square of 63-Down
38. Three more than 23-Across
39. Thirteen times 8-Down
41. Two more than twice 14-Down
43. 17-Across minus 66-Across
45. Twice 1-Across
46. Half of 55-Down
48. Nine more than 28-Across
50. Three times 6-Across
52. 64-Across plus 49-Down
53. Square of 1-Across
54. 39-Across plus 45-Across plus 2-Down
56. Digits of 36-Across rearranged
57. 28-Across plus 29-Across
59. 49-Down minus 31-Down
61. Two hundred more than 67-Across
62. Half of 10-Down
64. 1-Across minus 16-Across
65. Square of 64-Across
66. Three more than 64-Across
67. 3-Across plus 62-Across
68. Half of 32-Across
69. Three-fourths of 10-Down

DOWN

1. 35-Down divided by 69-Across
2. 62-Across times 61-Down
4. Twice 7-Down
5. Five more than 13-Across
7. Six times 26-Down
8. Digits of 28-Across rearranged
9. The sum of its digits is 30-Across
10. 1-Across plus 9-Across
12. 45-Across times 40-Down
14. Eleven times 68-Across
20. One hundred twenty-nine times 18-Across
22. 11-Across times 69-Across
24. Thirty-four times 8-Down
26. Twice 33-Down
30. 50-Across times 66-Across
31. 45-Across minus 69-Across
33. Consecutive digits in order
35. Square of 29-Across
37. 36-Across times 63-Down
40. Digits of 45-Across reversed
42. 13-Across times 46-Across
44. 29-Across times 51-Down
47. 26-Down plus 35-Down
49. Digits of 29-Across rearranged
51. 62-Across times 63-Down
55. Twice 46-Across
58. Digits of 28-Across rearranged
60. Two-thirds of 1-Down
61. 9-Across plus 16-Across
63. Twice 69-Across

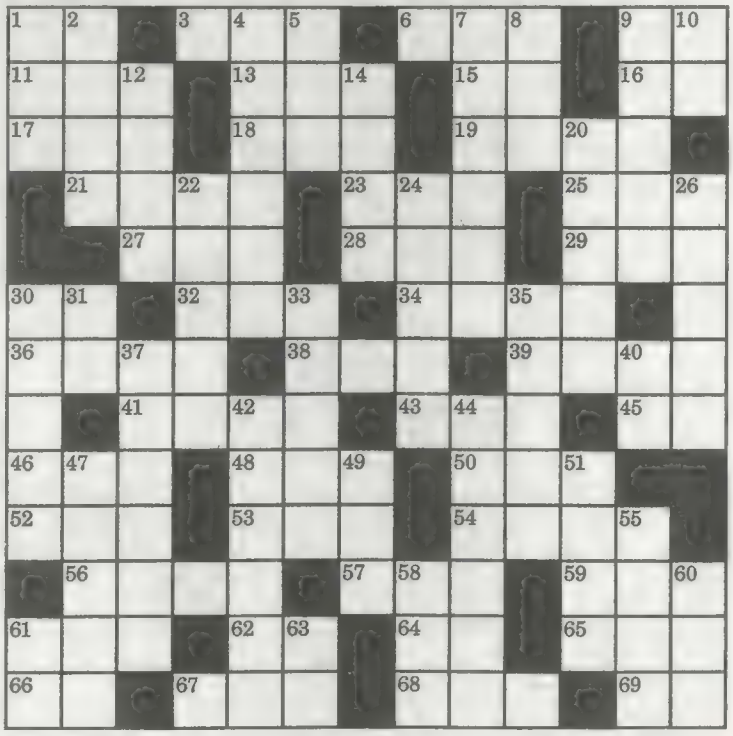


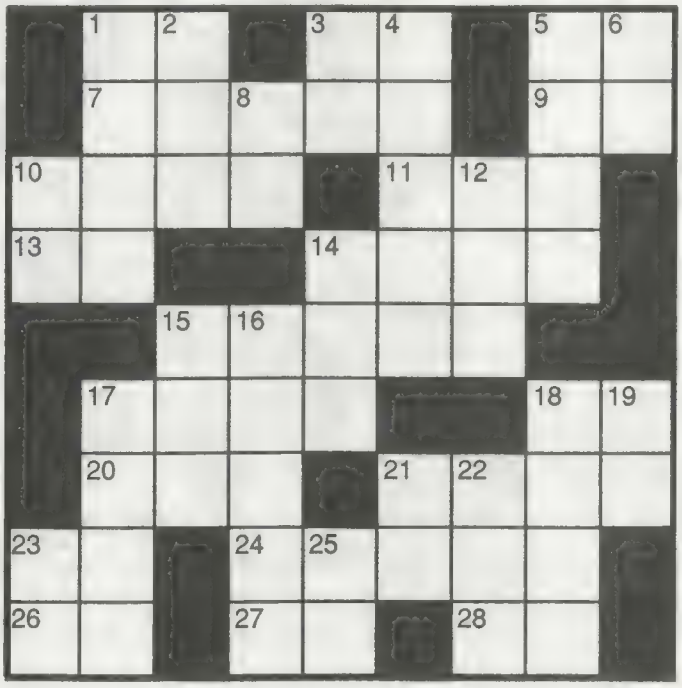
Figure Logic 48

ACROSS

1. 8-Down minus 18-Across
3. (O times 3-Down) minus 1-Across
5. 23-Down minus C
7. C times 16-Down
9. 25-Down minus 5-Across
10. A times the difference between 22-Down and 23-Across
11. The square of 18-Across
13. O times 10-Down
14. 5-Down plus 17-Across minus 28-Across
15. 2-Down times 10-Down
17. The square of 27-Across
18. 25-Down divided by H
20. A times 23-Down
21. E times 11-Across
23. (H times 5-Across) minus 28-Across
24. H times 1-Across times 10-Across
26. T times 23-Down
27. 13-Across divided by H
28. 5-Across plus S

DOWN

1. 10-Across plus 5-Across minus 12-Down
2. The square of 10-Down
3. 21-Down divided by H
4. 26-Across times 22-Down
5. 13-Across plus (O times 22-Down)
6. O times 5-Across
8. 25-Down plus S
10. H times 28-Across
12. K times 19-Down
14. 17-Across divided by C
15. A times 6-Down
16. 18-Across times 18-Down
17. 5-Down minus 27-Across
18. The square of 25-Down
19. R times 18-Across
21. 8-Down minus 5-Across
22. 9-Across times 23-Down
23. 28-Across plus T
25. 19-Down divided by H



1 2 3 4 5 6 7 8 9

Figure Logic 49

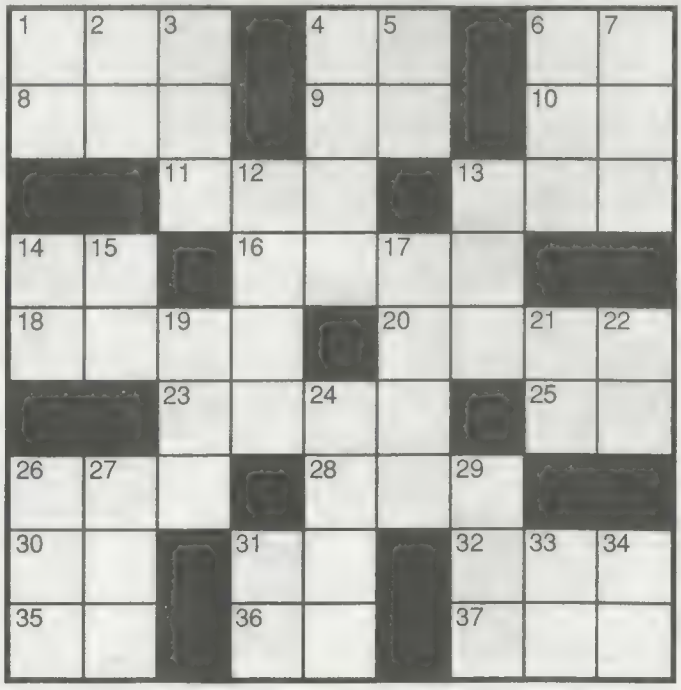
ACROSS

1. 9-Across times 14-Down
4. R times 5-Down
6. 10-Across plus S
8. K times 4-Across
9. 6-Across plus 30-Across
10. 14-Down plus R
11. A times 26-Down
13. 4-Across plus G
14. 1-Across divided by 36-Across
*16. 25-Across times the sum of 19-Down and (I times 6-Across)
*18. R times 37-Across
20. 31-Down times the square of 21-Down
23. (26-Across minus 4-Across plus 5-Down) times 25-Across
25. 14-Down plus S
26. 37-Across divided by N
28. 17-Down divided by 10-Across
30. 17-Down divided by 26-Down
31. H times 33-Down
32. 1-Across plus E
35. 18-Across divided by 26-Down
36. H times 9-Across divided by R
37. 29-Down plus 14-Down

DOWN

1. N times 25-Across
2. 9-Across reversed
3. The square of 9-Across divided by E
4. 25-Across times the difference between 27-Down and 6-Across
5. 25-Across reversed
6. 37-Across divided by G
7. 12-Down divided by I
*12. R times 29-Down
13. G times 25-Across
14. Sum of the digits of a starred entry
15. 4-Across minus A
*17. N times 11-Across
19. 16-Across divided by 10-Across
21. 25-Across minus H
22. R times 21-Down
24. 9-Across times the difference between 26-Across and 14-Down
26. Consecutive digits, not in order
27. 10-Across times the sum of 10-Across and 30-Across
29. 5-Down times 33-Down
31. 30-Across reversed
33. 12-Down divided by 4-Across
34. 35-Across divided by H

Note: Entries with asterisks are different arrangements of the same four digits.



_ _ _ _ _ _ _ _ _
1 2 3 4 5 6 7 8 9

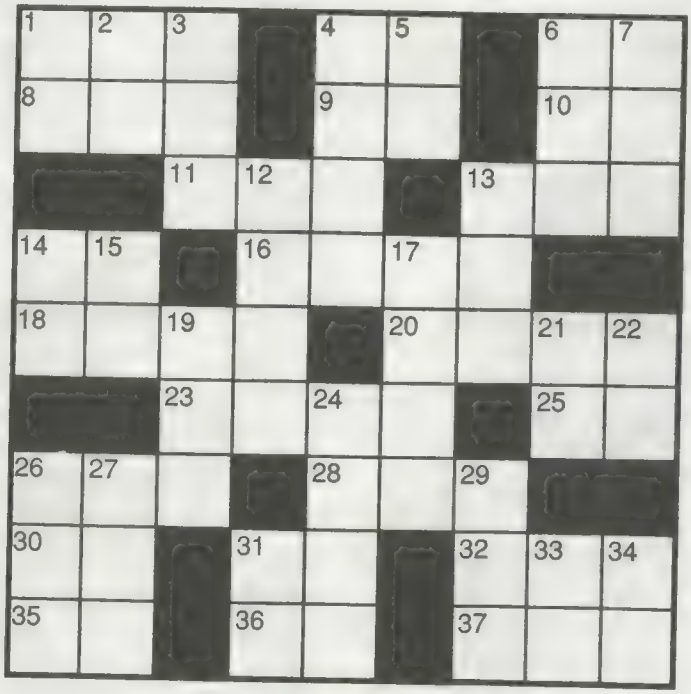
Figure Logic 50

ACROSS

1. L times 15-Down
4. 9-Across divided by P
6. 21-Down divided by B
8. 26-Down plus O
9. 8-Across divided by 36-Across
10. 14-Across divided by P
11. 26-Across minus (B times 5-Down)
13. L times 10-Across
14. 22-Down minus A
16. A times 5-Down times 31-Down
18. P times 16-Across divided by A
20. 15-Down times 21-Down
23. M plus (OC times 13-Down)
25. 21-Down reversed
26. I times 25-Across
28. 6-Across times 36-Across
30. The square root of 32-Across
31. A times 36-Across
32. E times 22-Down
35. T times 10-Across
36. An even perfect square
37. 36-Across times 15-Down

DOWN

1. (10-Across plus 35-Across) divided by M
2. 9-Across minus 4-Across
3. The square of 2-Down
4. 13-Down times 4-Across
5. (M times 6-Across) minus 10-Across
6. L times 6-Across
7. OC times 14-Across
12. A times 31-Down times 34-Down
13. The square of 4-Across
14. M times 30-Across
15. 21-Down minus 14-Across
17. 2-Down plus (OCC times 35-Across)
19. 6-Across times (9-Across plus 34-Down)
21. M times 22-Down
22. An odd perfect square
24. 6-Across times 25-Across
26. (16-Across minus OC) divided by I
27. 10-Across times 30-Across
29. M times 28-Across
31. 36-Across reversed
33. M times 2-Down
34. 21-Down minus (T times 36-Across)



0 1 2 3 4 5 6 7 8 9

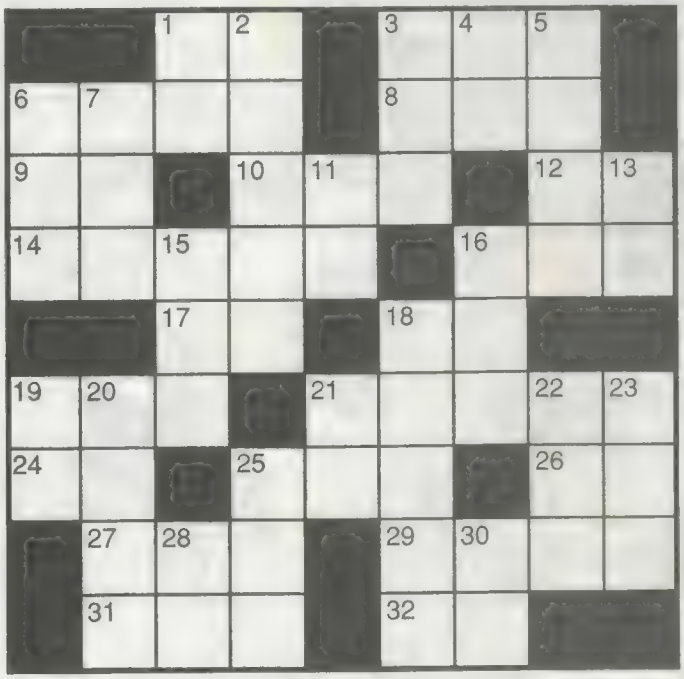
Figure Logic 51

ACROSS

1. 21-Down divided by E
3. E times 4-Down
6. 21-Across divided by 1-Down
8. L times 25-Down
9. A times 1-Across
10. 12-Across times 30-Down
12. 1-Across minus T
14. 21-Across plus (K times 20-Down)
16. F times 28-Down
17. F times 1-Across
18. N times 1-Across
19. 21-Down times 28-Down divided by N
21. The square of 22-Down
24. 32-Across minus T
25. T times 3-Down
26. O times 1-Down
27. (1-Down times the difference between 3-Across and 30-Down) divided by N
29. 24-Across times 30-Down
31. E times (9-Across plus 26-Across)
32. N times 13-Down

DOWN

1. 13-Down plus U
2. K times 6-Across
3. 1-Across times 13-Down
4. 22-Down divided by A
5. 10-Across times 12-Across
6. L times 4-Down
7. The square of 32-Across
11. Midway between 32-Across and 21-Down
13. 1-Down plus U
15. 4-Down plus 6-Down
16. The square of 1-Across
18. 21-Across minus the square of 26-Across
19. 32-Across plus 1-Down
20. D times 15-Down
21. 20-Down divided by 4-Down
22. The square of 13-Down
23. O times 26-Across
25. D times 28-Down
28. 1-Across plus 12-Across
30. 21-Down plus (N times 12-Across)



7	0	1	8	5	4	2	9	3	6

Figure Logic 52

DIRECTION A

1. Ascending odd digits
2. The product of its digits is 25-C
3. One even and two odd digits
5. 23-C minus twice 8-A
8. 14-A times 24-B
9. 22-A squared, minus 9-B
11. Two more than 22-A
14. 1-A times 24-B
16. The cube of one-half of 21-C
22. One-ninth of the sum of 19-B plus one
23. 20-C plus 25-B

DIRECTION B

1. The sum of its digits equals 1-A
3. One less than 23-A
4. The square of 18-C
6. One-tenth of 13-C
7. 18-C minus 20-C
9. The product of its digits is a multiple of 21-C
10. The square of one more than 14-C
17. 25-C times one-half of 20-C
19. 13-C plus 23-A
24. The sum of the digits of 19-B
25. 27-C minus 13-C

DIRECTION C

12. The square of 20-C
13. 3-A minus 18-C
14. The square root of 16-A
15. The square of 2-A
18. 1-B minus 2-A
20. Ascending even digits
21. The sum of its digits equals the last digit of 2-A
23. The sum of its digits is a perfect square
25. Consecutive descending digits
26. 13-C minus 1-B
27. A multiple of 23-A

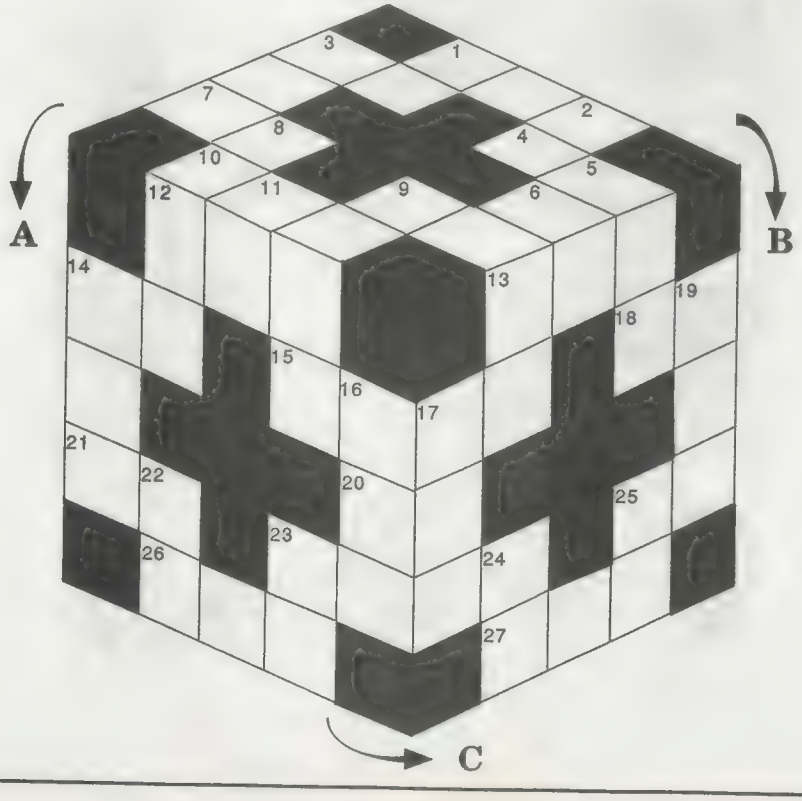


Figure Logic 53

DIRECTION A

1. 6-B plus 25-B
2. 1-A times 17-B
3. Number halfway between 1-B and 10-A
5. 7-B plus 18-C
7. One more than 10-B
8. Number halfway between 4-B and 25-C
9. Square of 10-B
10. Four more than 7-B
14. 3-B minus 8-A
16. Number halfway between 18-C and 26-B
20. 5-A minus 26-B
23. Number halfway between 1-B and 20-A
24. 10-A minus 8-B

DIRECTION B

1. 6-B plus 24-A
3. 9-B plus 25-C
4. The sum of its digits equals 26-B
6. Number halfway between 3-A and 24-A
7. 17-B plus 29-C
8. Number halfway between 11-C and 21-C
9. Square of 7-A
10. 1-A minus 16-A
17. 1-B minus 20-A
18. Number halfway between 14-A and 27-C
22. Number halfway between 3-A and 23-A
25. Five more than 24-A
26. An odd number

DIRECTION C

11. 20-A minus 18-C
12. Number halfway between 3-A and 29-C
13. 22-C minus half of 17-B
15. Square of 1-A
18. 27-C minus 16-A
19. 29-C minus 8-B
21. One-third of 1-A
22. Number halfway between 10-A and 23-A
23. 8-A plus three times 2-A
25. Square of 29-C
27. 17-B plus 25-B
28. 8-B times 20-A
29. Sum of the twelve digits in 9-A, 9-B, and 15-C

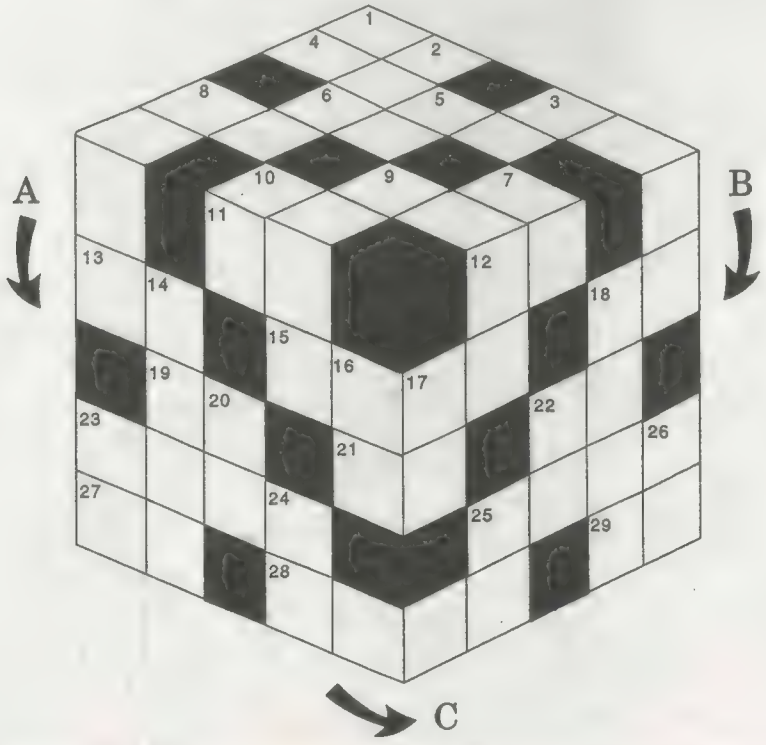


Figure Logic 54

ACROSS

1. Half of 12-Down
3. One less than 12-Down
5. Square of 12-Down
6. Eight times 3-Across
8. Three times 3-Across
9. Four hundred more than 8-Down
11. Four times 1-Down
13. Digits of 6-Across rearranged
15. Its third digit is the sum of the other two
16. One more than 1-Across
17. Four times 16-Across
18. Half of 5-Across
21. Square of 16-Across
24. Twice 12-Down
25. Square of 29-Down
27. Twice 32-Across
28. Seven times 17-Across
30. Three times 20-Down
32. Two less than 29-Down
33. Twice 18-Down

DOWN

1. Four more than 1-Across
2. Same digit three times
3. Half of 2-Down
4. First two digits of 5-Down
5. Twice 15-Across
7. Three times 21-Across
8. Digits of 12-Down reversed
10. Twice 27-Across
12. Four-fifths of 18-Down
14. Twice 24-Across
15. 15-Across minus 24-Across
18. 16-Across plus 32-Across
19. Twice 9-Across
20. Four times 29-Down
22. 6-Across plus 12-Down
23. One-eighth of 25-Down
25. Square of 32-Across
26. 18-Across plus 18-Down
29. 8-Down minus 17-Across
31. Three times 32-Across

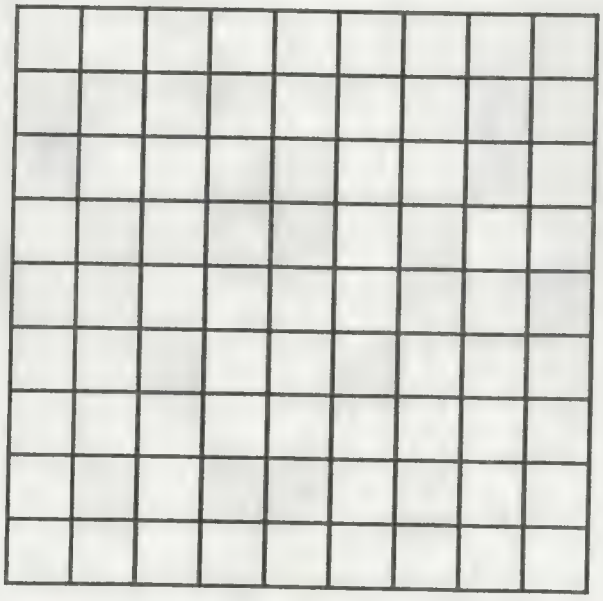


Figure Logic 55

ACROSS

1. One less than 27-Across
3. 1-Across times 21-Down
6. Digits of 24-Down rearranged
7. 30-Across times 8-Down
9. 27-Across plus 8-Down
10. 17-Across plus 6-Down
11. 7-Down plus 10-Down
12. Consecutive odd digits in some order
14. 11-Across minus 21-Down
16. 2-Down minus 7-Down
17. Same digit repeated
19. Consecutive digits in some order
21. 10-Across plus 13-Down
23. One more than 32-Across
25. 19-Across times 21-Down
27. Twice 21-Down
28. Square of 31-Across
30. 8-Down times 21-Down
31. Square of 21-Down
32. 1-Across plus 4-Down

DOWN

1. Five times 3-Down
2. 21-Down plus 26-Down
3. 6-Down times 21-Down
4. One more than 27-Across
5. 3-Across plus 24-Down
6. 6-Across plus 26-Down
7. Ten more than 27-Across
8. 26-Down minus 17-Across
10. Same digit repeated
13. Four more than ten times 2-Down
15. 5-Down plus 6-Down
18. 1-Down plus 21-Down
20. Square of 26-Down
21. One third of 19-Across
22. Half of 6-Across
23. 16-Across plus 21-Down
24. 1-Across plus 11-Across
26. 19-Across plus 27-Across
29. Twice 4-Down
30. Consecutive digits in some order

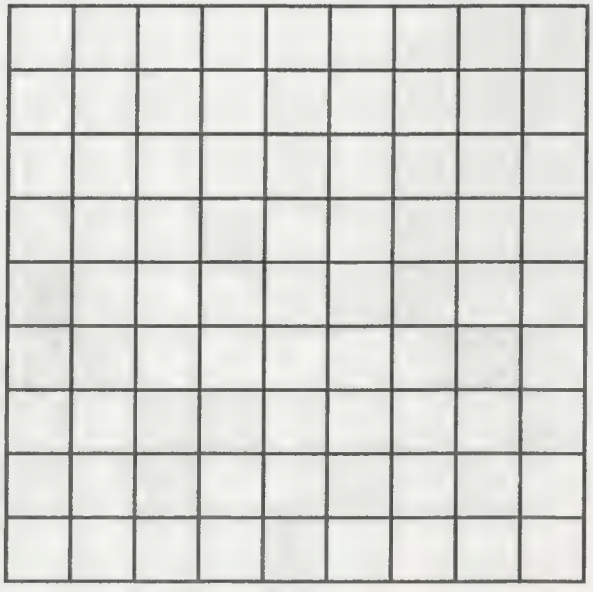


Figure Logic 56

Five philanthropists recently donated adjacent building lots to Habitat for Humanity on which volunteers would build low-cost houses. All of the lots were the same depth, but the width of the lots differed by at least five feet. The smallest lot was more than fifty feet wide, and the largest was less than one hundred feet. NOTE: All dimensions are expressed in feet unless specified otherwise. A lot's depth in feet times its width in feet equals its square footage; square footage divided by nine equals square yardage.

ACROSS

1. The last two digits of Ben's square footage
3. Edna's square yardage
7. The first digit is the sum of the digits of Dave's square footage; the second and third digits are two of those digits
8. Square yards in Al's and Ben's lots combined
9. One less than Dave's width
10. The same as 1-Across
12. Total width of all lots but Dave's
13. Width of Al's lot
14. The first digit is one more than the second, the third is one more than the fourth
16. Total square footage of all lots but Edna's
18. 15 more than the sum of Al's and Ben's square yardage
19. Two identical digits
21. Five more than 21-Down
22. Width of Ben's lot
24. The fourth and fifth digits of Edna's square footage
25. The middle two digits are the difference in width of Al's and Cora's lots
27. Square yards in Ben's lot
29. Square yards in Dave's lot
30. The first two digits of Edna's square footage

DOWN

1. The first two digits of Ben's square footage
2. Depth of each lot
3. Same as 28-Down
4. Combined square footage of Al's, Ben's, and Edna's lots
5. Square yardage of all lots but Dave's
6. The last three digits of 3-Across reversed
7. Square yards in Cora's lot
9. The digits of 13-Across reversed
11. Combined square footage of Ben's and Edna's lots
15. Width of Cora's lot
16. Square footage of all lots but Cora's
17. One-half the width of Cora's lot
18. Combined square yardage of Al's and Dave's lots
19. 100 more than 27-Across
20. Width of Edna's lot
21. The digits of 27-Across, but not necessarily in the same order
23. Combined total width of all lots
26. Difference in width of Al's and Edna's lots
28. The third and fourth digits of Edna's square footage

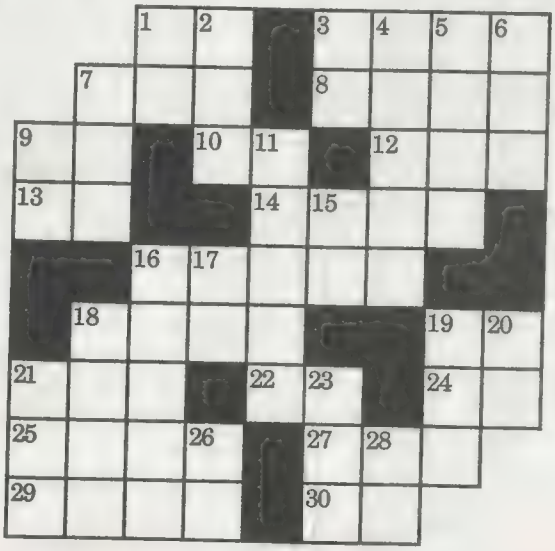


Figure Logic 57

Brian, Liz, and Joy were comparing the costs of each one's tuition, room and board, books, student fees, and car expenses for the fall semester at college. Joy moaned that her tuition at the University was three times Liz's tuition at State College, but Liz noted that her tuition was three times the tuition charged at the community college Brian attends. Joy doesn't have a car, since she lives on campus, but her room and board costs as much as Brian's apartment and food plus the cost of Liz's books. Liz was happy to live rent-free with her parents, paying for her food only; she ended up spending twice as much on her new car as she spent for room and board. Brian, on the other hand, was able to keep his beloved old car running for only three times the cost of Liz's student fees. The strangest thing they discovered was that each student spent eight dollars for books for every year he or she had lived.

ACROSS

1. Five times Joy's age
3. Liz's books
5. Liz's age
7. Liz's tuition
8. Joy's total expenses
9. 100 more than Joy's fees
11. One more than six times Brian's fees
13. Five less than Joy's books
15. Brian's fees
16. Twice Liz's age
17. Liz's car
20. Brian's tuition minus Brian's fees minus Liz's fees
22. Joy's fees
24. Joy's tuition
25. Brian's total expenses
27. Brian's age
28. Brian's books
29. Four times Brian's age

DOWN

1. Four times Liz's age
2. Joy's room and board plus Liz's tuition plus Liz's car
3. Joy's books
4. Brian's car
5. Joy's room and board
6. Two less than twice Joy's age
10. Joy's age
11. Liz's room and board
12. One more than Joy's books plus Liz's age
13. Liz's fees
14. Brian's tuition
18. Brian's room and board
19. One-half the sum of the three students' ages
21. Liz's total expenses
22. One less than Joy's books
23. Fifty more than three times Brian's books
24. The sum of the three students ages
26. Liz's fees minus Joy's fees

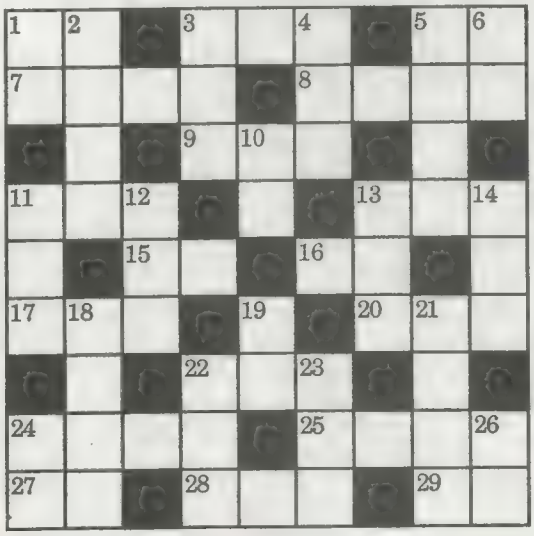


Figure Logic 58

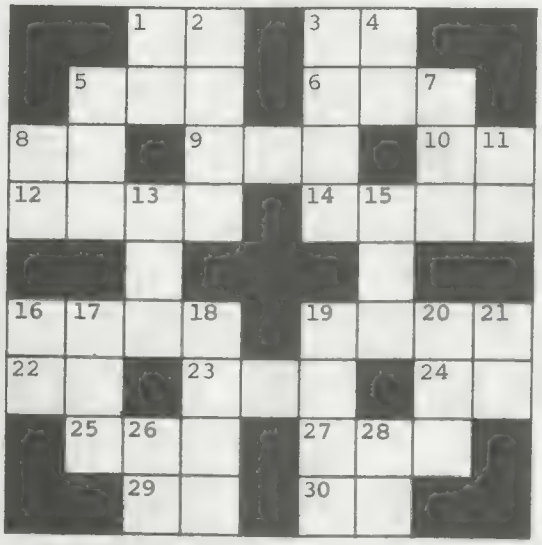
When Lady Elaine applied for the position of chatelaine at Logicians' Castle, she was tested on her math and logic skills with this Figure Logic. If solved correctly, she was told, the solution would provide her with all the information required to do her job correctly, including the number of yeomen, serfs, and scullions needed the total number of inhabitants, and the measurements of the castle itself. Elaine quickly solved the puzzle, and was hired immediately. Can you do as well?

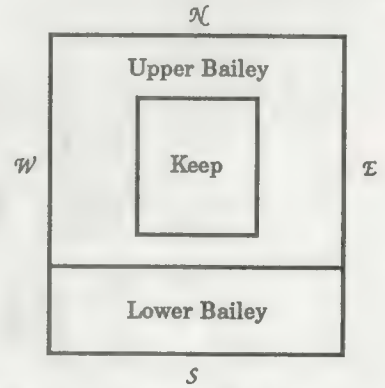
ACROSS

1. Number of scullions needed
3. Keep: E—W in feet
5. Upper Bailey: N—S in feet
6. Fifteen more than 5-Down
8. Keep: N—S in feet
9. Eight more than the total perimeter in yards
10. Lower Bailey: N—S in feet
12. Twice 16-Across
14. Four times the combined area of the Upper Bailey and the Keep in square yards
16. Year the castle was built
19. Three-quarters of 14-Across
22. Number of yeomen needed
23. 25-Across plus 27-Across
24. Total number of inhabitants
25. One less than perimeter of the Upper Bailey in feet
27. Last three digits of 19-Down
29. Overall: E—W in yards
30. One-half the perimeter of the Lower Bailey in yards

DOWN

1. Number of serfs needed
2. Twice 12-Across
3. Total area in square yards
4. One-quarter of the total perimeter in yards
5. Overall: E—W in feet
7. Perimeter of the Lower Bailey in feet
8. Upper Bailey: N—S in yards
11. Overall: N—S in yards
13. One-half the area of the Keep in square yards
15. The area of the Lower Bailey in square yards
16. One-half of 1-Down
17. Age of castle in 1850
18. Six times 20-Down
19. Twice the total area in square yards
20. One-half the area of the Upper Bailey, excluding the Keep, in square yards.
21. Five more than 4-Down
26. Five more than 10-Across
28. One-half the perimeter of the Keep in yards





Note: This plan of the Castle is not drawn to scale.

Figure Logic 59

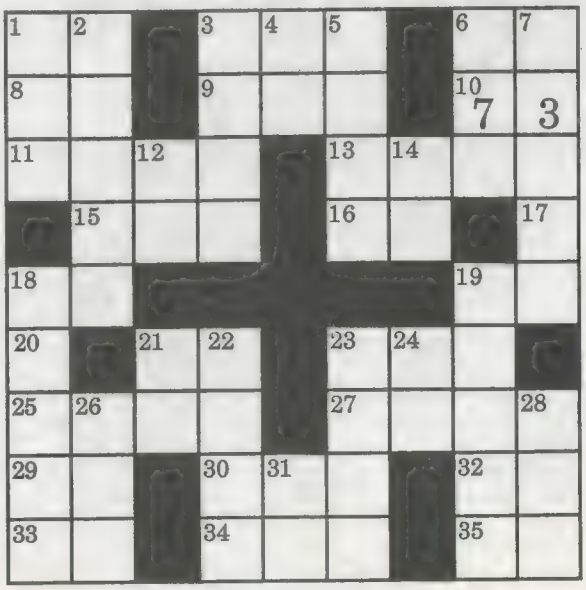
The small adjacent kingdoms of Quafor and Bicsten have similar monetary systems. Each has only six coins in circulation and no paper money. In Quafor, the smallest-value coin and basic unit of currency is the Qua; its other coins, in increasing value, are the San, Dec, Fer, Olp, and Diln. Each of these is worth some whole number of Quas, but each coin is marked only with its name, not its value in Quas. In Bicsten, the basic unit is the Bic, but there is no one Bic coin. The coins they do have, in increasing value, are the Caj, Jek, Luc, Gov, Kay, and Nept; as in Quafor, these coins are marked only with their names. One Diln equals one Nept in value, and these are the only two coins worth more than 100 Quas/Bics; neither, however, is worth more than 200. Two Quas equals three Bics in value, but no coins other than the Diln and Nept reflect that value ratio. To provide additional currency values, each country packages sealed rolls of all their coins except the Qua; each roll is worth the total Qua/Bic value of the coins in it. The number of coins in a roll is different for each coin. Use this information and the clues below to complete the diagram.

ACROSS

1. Number of Jeks in three Govs
3. See 3-Down
6. Number of Quas in one Fer plus two Sans
8. Number of Quas in one Olp
9. Number of Jeks in one roll of Govs
10. Number of Dilns in one roll
11. Number of Bics in one roll of Kays plus one roll of Govs plus one roll of Lucs plus one roll of Jeks plus one roll of Cajs
13. Number of Quas in one roll of Dilns
15. Number of Bics in three Nepts
16. Number of Govs in one roll
17. Number of Quas in one Dec minus one Qua
18. Number of Nepts in one roll
19. Number of Sans in one Diln
20. Number of Sans in one roll
21. Number of Olps in one roll
23. Number of Bics in three rolls of Jeks
25. Number of Bics in one roll of Kays
27. Number of Quas in 167 rolls of Sans
29. Number of Bics in two Govs plus one Jek plus one Caj
30. Number of Quas in one roll of Decs
32. Number of Fers in one roll
33. Number of Kays in one roll
34. Number of Quas in one Dec plus one Fer plus one Olp plus one Diln
35. Number of Cajs in one roll

DOWN

1. Number of Bics in three Kays
2. Number of Bics in one roll of Nepts
3. Last three digits are three times 3-Across
4. Number of Bics in one Gov
5. Number of Bics in one roll of Govs
6. Number of Bics in one roll of Lucs
7. Number of Quas in four rolls of Dilns
12. Number of Quas in one Olp minus one Dec and also minus one Qua
14. Number of Lucs in one roll
18. Number of Quas in eight rolls of Dilns
19. Number of Bics in 2503 Lucs
21. Number of Bics in one Kay minus one Bic
22. Number of Bics in 101 Lucs
23. Number of Quas in one roll of Olps
24. Number of Jeks in one roll
26. Number of Quas in one roll of Fers
28. Number of Cajs in 11 rolls
31. Number of Decs in one roll



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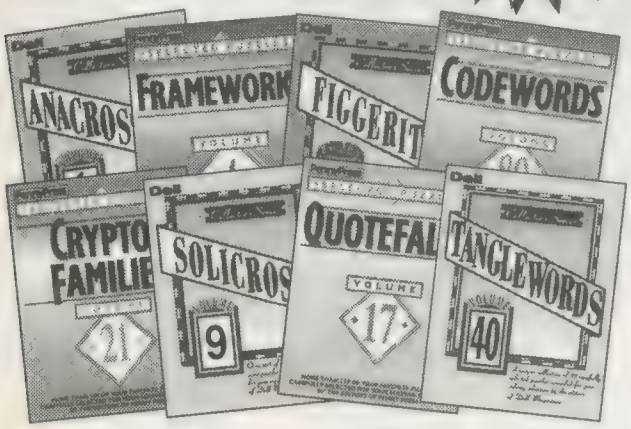

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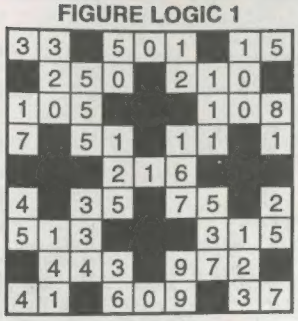

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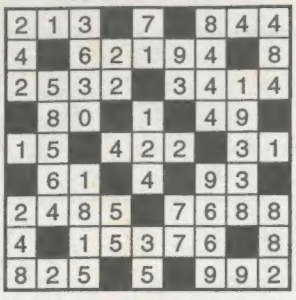

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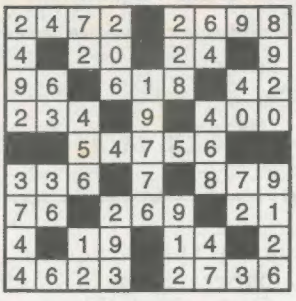

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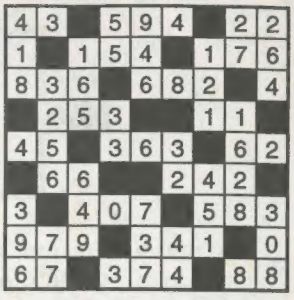

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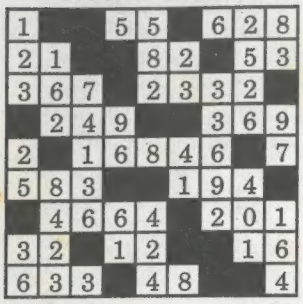

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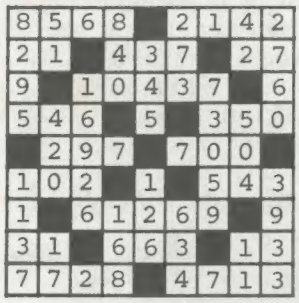

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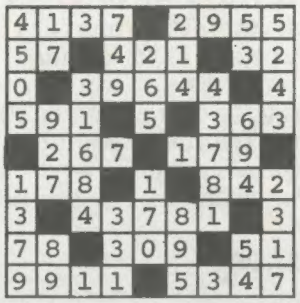


FIGURE LOGIC 8

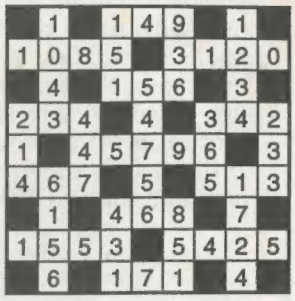


FIGURE LOGIC 9

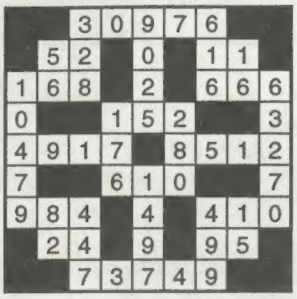


FIGURE LOGIC 10

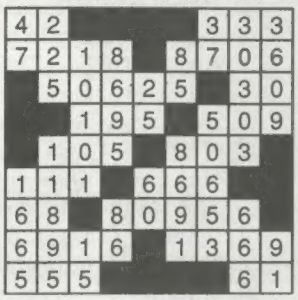


FIGURE LOGIC 11

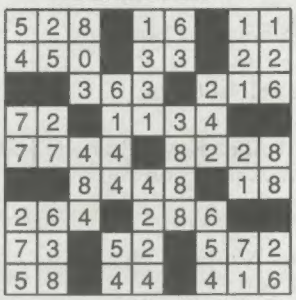


FIGURE LOGIC 12

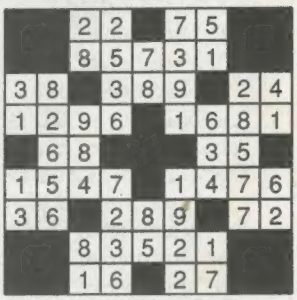


FIGURE LOGIC 13

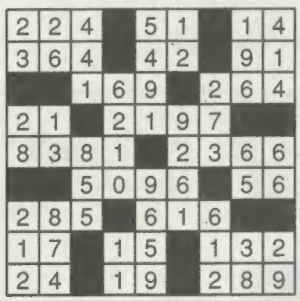


FIGURE LOGIC 14

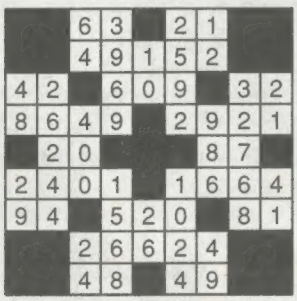


FIGURE LOGIC 15

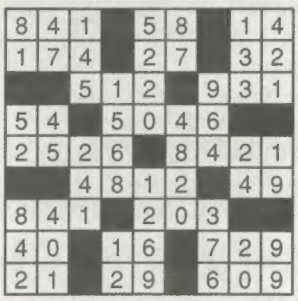


FIGURE LOGIC 16

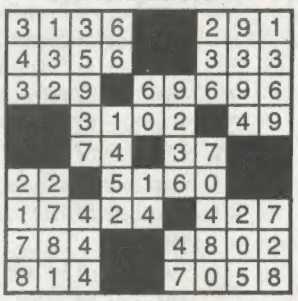


FIGURE LOGIC 17

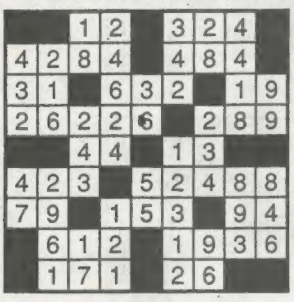


FIGURE LOGIC 18

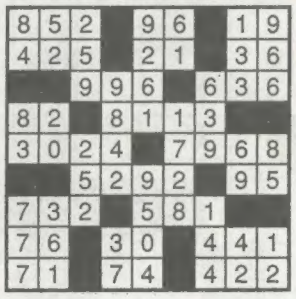


FIGURE LOGIC 19

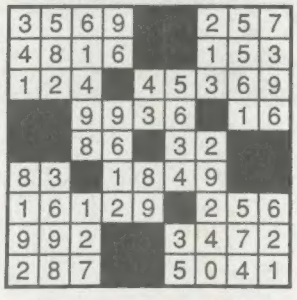
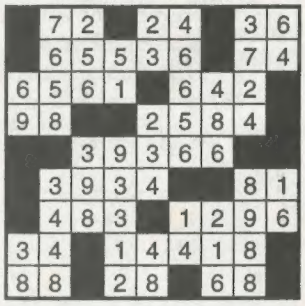


FIGURE LOGIC 20



Puzzle #	Starter
1.	.....24-Across is 315
2.	.....7-Down is 22
3.	.....14-Across is 234
4.	.....13-Across is 11
5.	.....7-Across is 21
6.	.....5-Down is 42
7.	.....27-Down is 89
8.	.....9-Across is 234
9.	.....20-Down is 15
10.	.....3-Down is 37
11.	.....18-Across is 7744
12.	.....11-Down is 41
13.	.....6-Down is 196
14.	.....10-Across is 32
15.	.....5-Down is 87
16.	.....4-Down is 66
17.	.....1-Across is 12
18.	.....9-Across is 21
19.	.....11-Down is 43
20.	.....6-Down is 64

FIGURE LOGIC 21

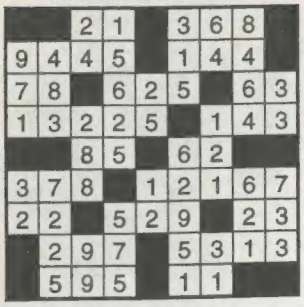


FIGURE LOGIC 22

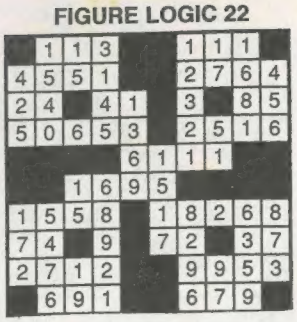


FIGURE LOGIC 23

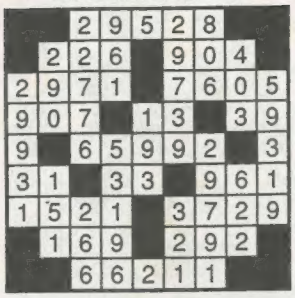


FIGURE LOGIC 24

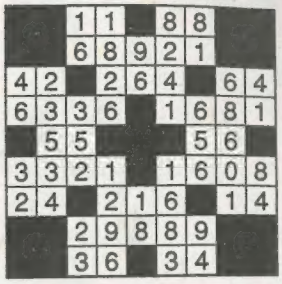


FIGURE LOGIC 25

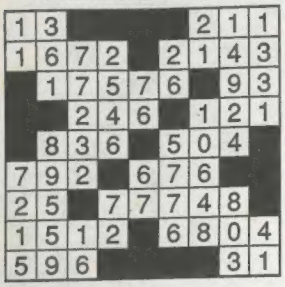


FIGURE LOGIC 26

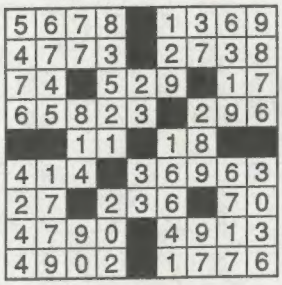


FIGURE LOGIC 27

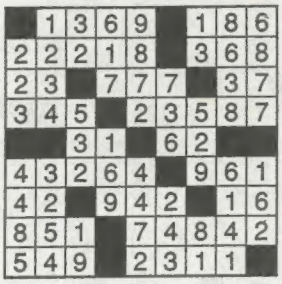


FIGURE LOGIC 28

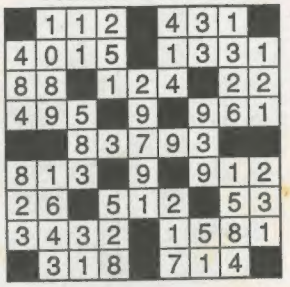


FIGURE LOGIC 29

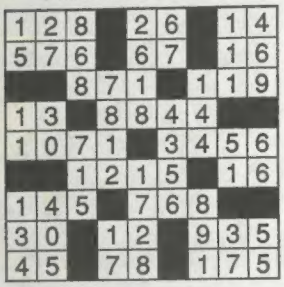


FIGURE LOGIC 30

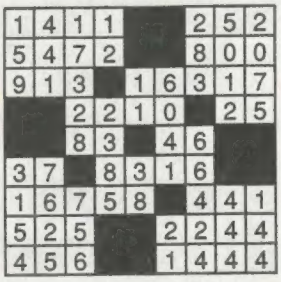


FIGURE LOGIC 31

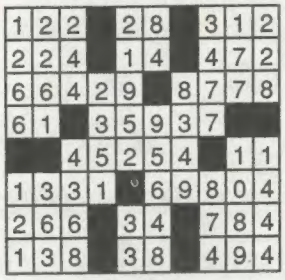


FIGURE LOGIC 32

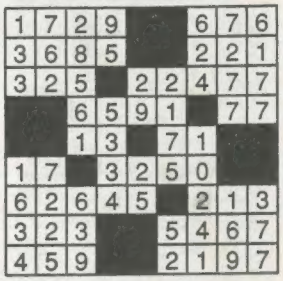


FIGURE LOGIC 33

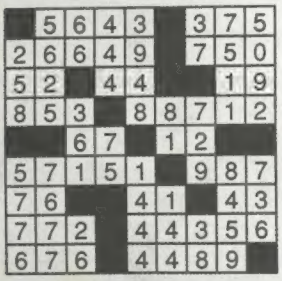


FIGURE LOGIC 34

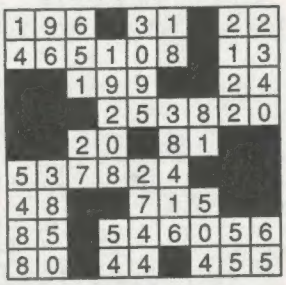


FIGURE LOGIC 35

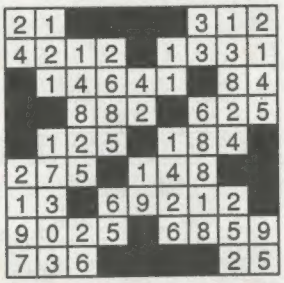


FIGURE LOGIC 36

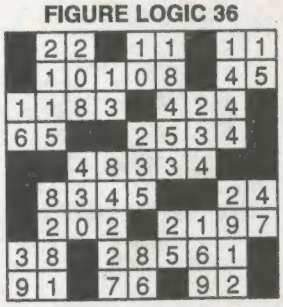


FIGURE LOGIC 37

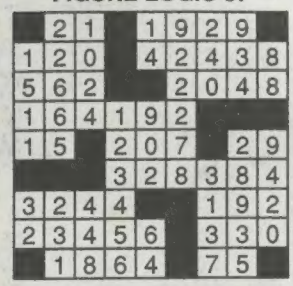


FIGURE LOGIC 38

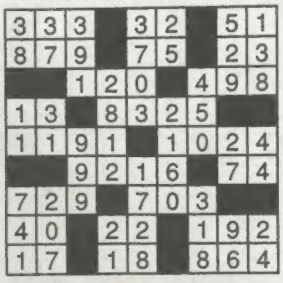


FIGURE LOGIC 39

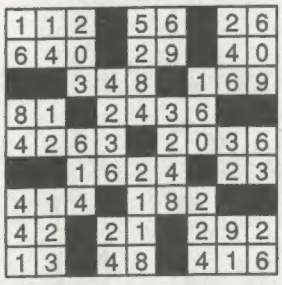
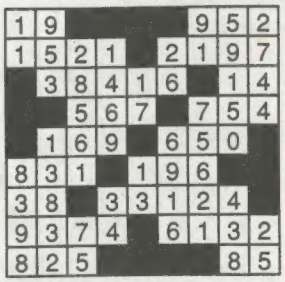


FIGURE LOGIC 40



Puzzle #	Starter
21.	.3-Down is 315
22.	.4-Down is 12321
23.	.12-Across is 13
24.	.1-Across is 11
25.	.1-Across is 13
26.	.1-Across is 5678
27.	.1-Across is 1369
28.	.1-Across is 112
29.	.1-Across is 128
30.	.27-Down is 144
31.	.19-Across is 11
32.	.16-Across is 13
33.	.27-Across is 76
34.	.1-Across is 196
35.	.9-Across is 1331
36.	.12-Down is 234
37.	.22-Down is 231
38.	.2-Down is 37
39.	.36-Across is 48
40.	.12-Across is 14

FIGURE LOGIC 41

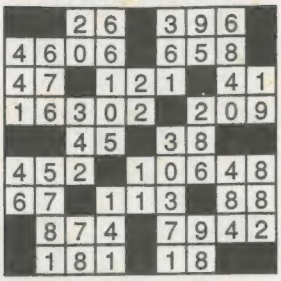


FIGURE LOGIC 42

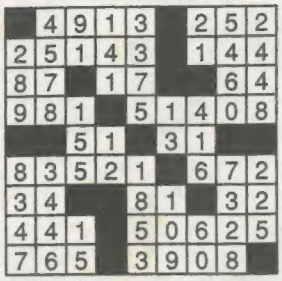


FIGURE LOGIC 43

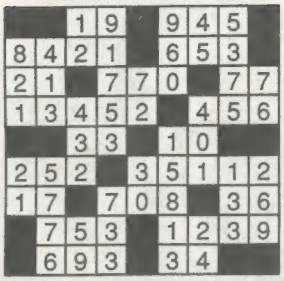


FIGURE LOGIC 44

FIGURE LOGIC 45

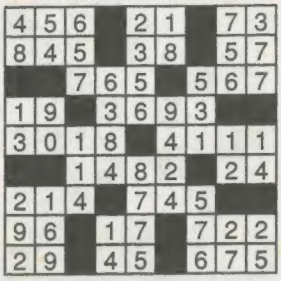


FIGURE LOGIC 46

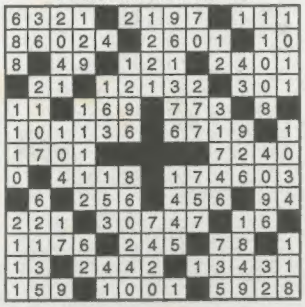


FIGURE LOGIC 47

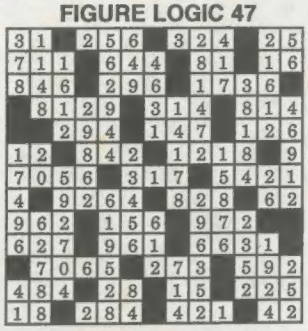


FIGURE LOGIC 48

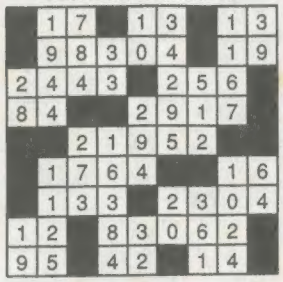


FIGURE LOGIC 49

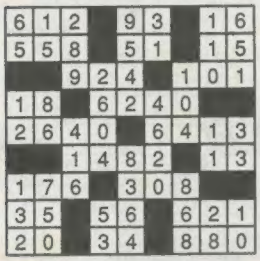


FIGURE LOGIC 50

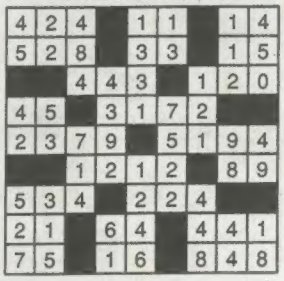


FIGURE LOGIC 51

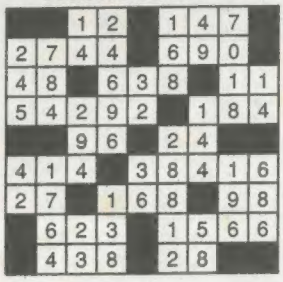


FIGURE LOGIC 52

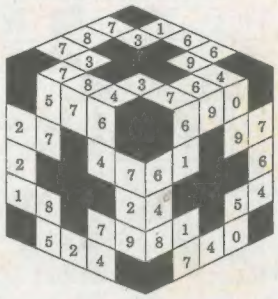


FIGURE LOGIC 53

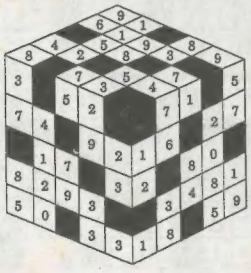


FIGURE LOGIC 54

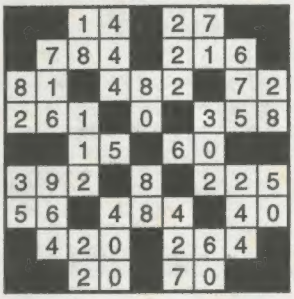


FIGURE LOGIC 55

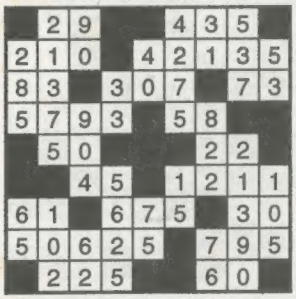


FIGURE LOGIC 56

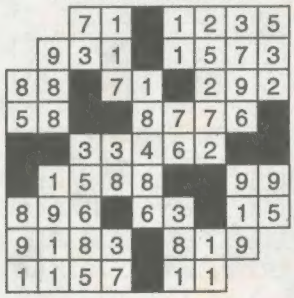


FIGURE LOGIC 57

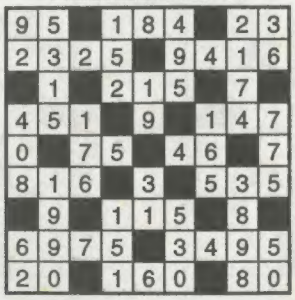


FIGURE LOGIC 58

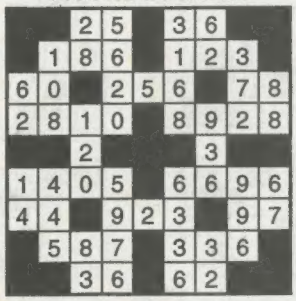
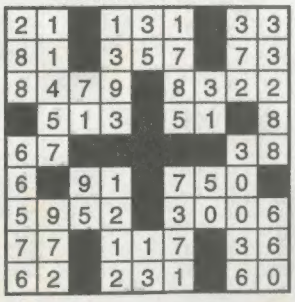


FIGURE LOGIC 59



Puzzle #	Starter
41.	11-Down is 22
42.	32-Down is 15
43.	16-Across is 456
44.	31-Across is 31
45.	21-Down is 12
46.	23-Across is 301
47.	10-Down is 56
48.	19-Down is 64
49.	17-Down is 4620
50.	6-Across is 14
51.	21-Across is 38416
52.	16-A is 729
53.	10-B is 73
54.	1-Across is 14 and starts in 3rd box across
55.	1-Across is 29 and starts in 2nd box across
56.	23-Down is 381
57.	13-Across is 147
58.	16-Across starts with 14
59.	13-Across is 8322

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